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ABSTRACT

Twelve North Carolina colleges and universities received state funds to support 3-year pilot programs related to clinical teaching in teacher education. Descriptions of the 12 programs, collectively known as the Model Clinical Teaching Network, are given in this report. These pilot projects include one or more of the following features: use of summer periods to provide teacher education students with paid supervised teaching activities; strong supervised teaching experience during the first year or two of full-time teaching; cooperative development of one- and two-year clinical teaching programs for beginning teachers; and incorporation of experienced school teachers as clinical faculty with major responsibility for methods courses and student teacher supervision. The chapter titles are: "The Wisdom of Practice and the Magic of Technology Applied to the Clinical Preparation of Teachers"; "A Full Year's Perspective on Learning to Teach"; "Reflective Teaching in a Summer Clinical Model"; "A Developmental Approach to Teacher Education"; "Summer Student Teaching"; "Teacher Education through School-University Collaboration"; "Teacher Education through Partnership Model Summer School Program"; "Preparation of Public School Master Teachers To Be University Supervisors of Student Teachers"; "Summer Student Teaching of Children with Handicaps"; "Reform of Curriculum and Instruction in Teacher Education and in Elementary Schools"; "A Medical Education Model for Teacher Education"; "A Partnership of Equals: University Professors and Public School Teachers"; and "A Case Study Approach to Clinical Teaching." (IAH)

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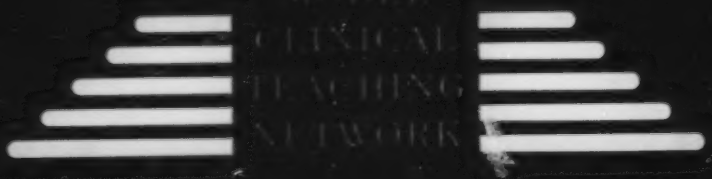

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Learning to Teach

in North Carolina

Model Clinical Teaching Network

The University of North Carolina

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Preparing teachers for the public schools of North Carolina is one of the most important responsibilities of our universities. We in the University of North Carolina are committed to improving teacher preparation to ensure that the students of our state have access to the best education possible.

The Model Clinical Teaching Network constitutes one significant effort under way in North Carolina to advance the preparation of prospective teachers. The pilot programs described in this brochure illustrate an innovativeness and a thoroughness that I hope will inspire other institutions. They are striving to do more than prepare teachers for what exists. They aim to make the new teachers coming into our schools sensitive to the diversity of students and able to devise curriculum that will engage learners both intellectually and socially.

I commend this information to fellow educators and to all the citizens of North Carolina.

C. D. Spangler, Jr., President
The University of North Carolina

North Carolina's Model Clinical Teaching Programs were sparked by *The Education of North Carolina's Teachers*, a report submitted to the 1987 North Carolina General Assembly by The University of North Carolina's Task Force on the Preparation of Teachers. The four recommendations relevant to clinical teaching in teacher education (pp. 49, 64) were as follows:

- That greater use be made of the summer periods . . . when many teacher education students can undertake paid supervised teaching activities in selected public school summer programs offered by local school systems under the Basic Education Program. . . .
- That a strong supervised teaching experience take place in the first year or two of full-time professional teaching in the schools . . . .
- That there be cooperative development of one- and two-year clinical teaching programs [for beginning teachers] in the public schools. . . .
- That each education faculty include adequate numbers of competent, experienced school teachers who make up a paid "clinical faculty" who continue to teach full- or part-time in the schools and who have a major responsibility for the methods courses, student supervision and professional practices portions of the teacher preparation program.

In 1987 the North Carolina General Assembly enacted legislation and appropriated funds to support programs that would demonstrate one or more of these recommendations. On the basis of competitive proposals, 12 colleges and universities (10 public and 2 private) received grants. Their efforts have become known collectively as the Model Clinical Teaching Network.

Since the inception of the programs, the directors have met twice a year to share information. By spring 1991 several of the programs had completed three years of operation, and the directors reckoned that sufficient time had passed to report progress. That is the purpose of this publication. A few programs that began after the first year have been included because their progress was accelerated by contact with the initial projects.

To obtain objectivity in the reporting, The University of North Carolina General Administration engaged a long-time student of teacher education, Roy Edelfelt, to interview teachers, administrators, and professors at each site; to examine the written materials developed by each project; and to write a brief description of each program. The respective directors then reviewed the descriptions for accuracy and comprehensiveness.

The following pages present the products of this process. The volume is the first description of all of North Carolina's Model Clinical Teaching Network Programs.

Mary E. Wakeford, Assistant Vice-President
for Academic Affairs
The University of North Carolina

Joseph Kretovics, Coordinator
Model Clinical Teaching Network

THE WISDOM OF PRACTICE AND THE MAGIC OF TECHNOLOGY APPLIED TO THE CLINICAL PREPARATION OF TEACHERS

Appalachian State University,
the Northwest Regional Education Center,
and the Public Schools of Ashe, Avery, Caldwell,
Watauga, and Wilkes Counties

The model clinical teaching program at Appalachian State University (ASU) reflects a long tradition in teacher education. For many years prospective teachers being prepared at ASU have been assigned to the public schools of the region for student teaching and other laboratory experiences. However, the model program is heralding a renaissance of the tradition, particularly of its clinical dimension.

In the new model, clinical teaching experiences in required education courses have been reformulated. The plan being implemented also includes the gradual application of several technological innovations and procedures that could revolutionize the way in which interaction takes place between the university and the schools, professors and teachers, and professors and student teachers.

The renaissance encompasses the preparation of elementary and middle school teachers, over which the College of Education has control. Preparation of secondary school teachers, which remains under the guidance of subject-matter departments in the College of Arts and Science, is not a part of the model program.

IMPETUS FROM TEACHERS

For a long time the impetus for change in preparing teachers has come from college and university people; not much input has been sought from school people. At ASU the opposite has been true. To develop a basis for a new college model of teaching and teacher preparation, particularly for methods courses and clinical teaching experiences, the College of Education surveyed and interviewed teachers in the region for guidance. The college people wanted to elicit teachers' opinions on what beginning teachers need to know and what prospective teachers find difficult to learn.

In the survey, 17 teaching tasks were identified, and teachers were asked to respond to several queries about each one. The tasks represented problems in knowledge and skill areas essential for beginning teachers. Among them were setting goals, ascertaining characteristics of students, using instructional time, grouping students, selecting and using instructional materials and strategies, evaluating students' learning, evaluating oneself, interacting with students, providing feedback to students, and communicating with parents. The teachers were

polled on the difficulty of learning each task. They were also canvassed on the specific factors—strategies, techniques, resources, criteria, measures, etc.—that they considered critical in making teaching decisions related to each task.

Of 800 teachers surveyed, 587 (73 percent) completed and returned the questionnaire. In addition, 80 teachers were interviewed in focus groups. The results became the basis for altering content in required education courses and redesigning clinical experiences to accompany selected courses.

INTRODUCTORY COURSE

The introductory course that ASU students had to complete before they could be admitted to a teacher education program became the initial target. The course, usually taken in the sophomore year, now includes a blend of reading, observations in school classrooms or via videotape, case study work, and campus classroom discussion. Each student spends about 25 hours performing observations.

Observation and the introductory course at the university run in parallel tracks. Thus, for example, on Mondays and Wednesdays from 9:00 to 10:00 a.m., students may observe in a local school or view videotapes, and on Tuesdays and Thursdays at those same hours, they may attend the introductory class. Under this arrangement students' impressions of what they are observing are fresh, and they have an almost immediate opportunity to discuss what they have observed with peers and with their professor.

Area teachers' long-term experience with having college students in their classes has furnished a ready team of practitioners to host students. Some have been trained to work with prospective teachers; all have a sense of the goals of teacher education.

The purpose of the introductory course is to probe questions such as What is teaching? and What do teachers do? Students are prompted to examine what they know about those questions in a variety of ways. In addition to observing, they keep logs and journals on their observations, view videotapes, examine teachers' manuals, explore the professional literature, read the research, and take part in classroom discussions.

METHODS COURSES

The methods courses at ASU were particular targets of reform. Professors were requested to look at what they were doing and to reorganize their courses, if necessary, in terms of the critical problems that teachers have to solve and the tasks that teachers must be able to perform. They were then asked to specify at what point in the process of learning to teach—in the methods

class, during the first field experience, during student teaching, or in the first job—students should be able to solve each problem and perform each task. As a result, every methods course in the ASU curriculum for prospective elementary and middle school teachers was changed.

The results of the survey also made it clear that learning to teach had to include more than taking courses. That is, learning to work with problem children, with administrators, and with parents, learning to continue one's own professional growth, etc., required more than reading the literature and attending college classes. It demanded a wide variety of actual experience in schools.

"The introductory course now includes a blend of reading, observations in school classrooms or via videotape, case study work, and campus classroom discussion. Each student spends about 25 hours performing observations."

Making progress along these lines has not been easy; traditions and habits have not changed readily or quickly. Twenty-seven meetings with college faculty were part of the process of getting the curriculum reorganized to address the problems that public school teachers had identified.

At present, the students in two pilot sections take a semester block of courses in which 10 weeks of methods and observations are followed by 5 weeks of mini-student-teaching experiences in the field. Observations, which occur one day a week, are directed; for example, students are asked to take note of the way in which children are grouped for a particular activity; the routines that teachers use in taking attendance, supervising recess, or getting students to the bathroom; or the way in which teachers introduce a new concept. Students may participate in some minor teaching acts—working with small groups, taking youngsters to the library, duplicating materials, assisting the teacher, etc. All students keep a journal for further discussion with professors on campus, and as part of an experiment, some students come to campus one day a week for debriefing. Two or three days are set aside at the end of a semester (after the 5 weeks in a school) for students to spend time back on campus taking a critical look (with faculty) at their experience—a kind of recapitulation. Students in the traditional program follow alternative schedules and activities.

GENERAL CURRICULUM COURSE

Currently under way are two pilot sections (eight sections remain traditional) of a general curriculum course for prospective elementary school teachers, being taken at the same time as the methods courses. As in the introductory course and the methods courses, students are spending time in schools to try out what they are learning in college. William Blanton, director of the program, says,

> They may find out that the six-step lesson plan doesn't always work, that there are a number of approaches to

> teaching. We want our students to have a chance to try several—to plan, implement, evaluate, and reflect on teaching in the same way that a professional teacher would—while they are still undergraduates.

Coming up at ASU is an experiment in the general curriculum course to give students who are engaged in clinical teaching experiences an hour a day to think about—to reflect on—what they are doing. Explains Blanton,

> We know this is not something teachers now have an opportunity to do, but we want to try it to see if we can make teaching a more thoughtful process. We think that what's important is the knowledge it takes to recognize the need to solve a problem, and what a teacher has to assemble to solve a problem. That's what we want students to learn.

STUDENT TEACHING

Traditionally, most student teachers have been placed in areas such as Charlotte, Greensboro, and Winston-Salem and have been supervised by full-time university clinical faculty. The university supervisors have visited and conferred with the student teachers at least seven times a semester. Under the experimental program, student teaching locations are closer to the university, and the role of the university supervisor has changed.

"As cooperating teachers become more heavily involved in evaluating the performance of student teachers, elementary and middle school teacher education at ASU will come full circle. That is, at the completion of the program, as well as at the beginning of it, the standard will be based on teachers' opinion of what a graduate should know and be able to do."

Each student teacher is expected to demonstrate some basics before the end of student teaching. In the past, evaluation of such achievement has been the university supervisors' responsibility. However, beginning in spring 1992, the cooperating teachers will assume major responsibility for evaluation because they have daily contact with the student teachers, they model teaching methods that they hope the student teachers will use, and they observe and confer with the student teachers more frequently. Under the cooperating teachers' guidance, the student teachers will develop a portfolio, which will include a variety of indicators of their beliefs, knowledge, and growth—for example, information on how they teach reading; a personal philosophical statement on what teachers do and what the goals of public education are; videotaped excerpts of their performance; and specimens of their unit plans. Also included will be information on their potential for induction into the profession, obtained by the cooperating teacher and the university supervisor using instruments developed jointly by ASU and Arizona State University. The portfolio data may be supplemented by information from the university supervisor.

In the evaluation of student teachers, the emphasis is shifting from assignment of a letter grade for the experience to

assessment that requires students to demonstrate adequacy in performance. Finding agreement on that change has been difficult, but as cooperating teachers become more heavily involved in evaluating the performance of student teachers, elementary and middle school teacher education at ASU will come full circle. That is, at the completion of the program, as well as at the beginning of it, the standard will be based on teachers' opinion of what a graduate should know and be able to do.

TECHNOLOGICAL INNOVATION

In all of the clinical experiences at ASU, one of the important elements is prospective teachers discussing, analyzing, evaluating, and interpreting with faculty the encounters that they have with children in schools. Such communication and deliberation are always difficult and time-consuming. Starting in spring 1992, electronic mail (E-mail) and conferencing will be employed in communications among the prospective teacher in the field, the cooperating teacher, the university supervisor, and other professors on campus. To get started, the university, its public school partners, AT&T, Bell South, and Southern Bell have provided computers to a set of schools involved in clinical teaching experiences.

At the College of Education a distance learning and technology center has been completed that goes well beyond the hardware and the software for communicating by E-mail. Telecommunication and interactive television are now available, as well as E-mail. In each school there is also a distance learning and technology center dedicated to student learning and university clinical experiences.

RESULTS

All of these changes and new plans have been met with some hesitancy by both clinical and campus faculty, but after three years a number admit to enjoying their teaching more. The college's recent success in earning reaccreditation by the National Council for Accreditation of Teacher Education (NCATE) has given the renaissance credibility. Another sign of acceptance is support from the university's administration. In a time of budget cuts, the budget for the supervision of clinical teaching has not been reduced.

East Carolina University
and the Public Schools of Pitt County

In the pilot clinical teaching program at East Carolina University (ECU), prospective elementary school teachers are gaining a full year's perspective on public school teaching. A cohort of seniors begins working in schools on the first day that teachers report for work in late August. They see teachers plan before youngsters arrive. They witness teachers starting routines, securing books and equipment, reviewing the previous year's data on students, and readying classrooms for the first day of school. They attend preschool workshops and orientation days. Then they are present in the classroom two days a week until the middle of October, three days a week for the remainder of the fall semester. On the days when they are not in public schools, they are on campus, enrolled in a block course on organization, planning, management, and methods. In the second semester they intern full-time as student teachers.

To prepare for this intensive year, in addition to taking liberals arts courses during their first three years, ECU students take courses in educational psychology and human growth and development, and methods courses in mathematics, science, art, music, health, and physical education. Whenever clinical experiences are part of these courses, particularly the block course in the senior year, students are supervised by specially prepared teachers in the schools and by university supervisors.

For its first three years the pilot program included only about one-tenth of the students in the elementary program—16 or 17 each year. The number admitted in fall 1991 was increased to 26. Evidence is being collected to determine the feasibility of expanding the program to include all of ECU's prospective elementary school teachers.

COLLABORATION AN ESSENTIAL

One of the essentials of the pilot program is a close working relationship between the university and the six participating elementary schools: Ayden, K–4; Elmhurst, Falkland, Pactolus, and Wintergreen, all K–5; and G. R. Whitfield, K–8. The collaborative arrangement is designed to reduce the distance between the theory and the abstraction of the college classroom and the practical world of teaching children in schools. The partnership benefits the schools' teachers and students. Both profit from helping novices learn to teach and from interacting with the professors who guide and supervise the process.

Collaboration has opened a two-way street between the university and the schools. The principal of one of the pilot schools relates,

> Traditionally, it's been them [the university people] telling us. Now it's a sharing: They learn from us and we learn from them. One of the benefits for us is that our [school] program is constantly being revised and updated through working with the university. Both the university and the school take initiative.

MINI-TEACHING AND TEAM-TEACHING IN FALL SEMESTER

By being in school from the very first day, the interns see how diverse individuals become a group, how teachers establish relationships with students, how they explain their expectations for students' work and behavior, how they identify and then provide for individual differences, how they set and monitor rules. The interns also witness the details that go into scheduling a day, a week, and a semester. Most teacher education programs bring prospective teachers into schools after the start-up phase, so they miss the chance to see and understand what happens, until they face start-up alone on the first day of a job.

In assuming responsibilities as teachers-in-training, the interns venture forth gradually. First, they perform mini-teaching tasks—assisting with teaching, doing informal testing in reading, checking math achievement, inspecting master cards that indicate students' progress in the previous year, etc. Beginning in October, they team-teach with the regular teacher, who is called a clinical instructor. Gaining these types of supervised practical experiences is an objective for the fall semester.

ACCOMPANYING BLOCK COURSE

Concurrently the interns take a block course, which is team-taught by three professors. The course meets for several hours, three times a week in the first half of the semester, twice a week in the latter half. The schedule dovetails with the interns' clinical assignment of first two and then three days a week in schools. The proximity of the Pitt County Schools makes moving back and forth from school to university feasible.

The content of the block course is organization and planning, classroom management, and the teaching of reading and language arts. It integrates the subjects of comparable methods courses in traditional programs. The professors who teach the course supervise the clinical experiences related to it, as well as student teaching in the spring semester.

The block course provides opportunities to relate theoretical constructs and instructional strategies. For example, one day students may study and discuss a particular strategy in

class, and the next day they may try it in a school classroom. Students are also required to put together a unit of instruction, which might involve integrating language development with nurturance of thinking skills, or integrating the learning of reading skills with acquisition of subject matter. The focus of the reading and language arts segment is epitomized by the convictions of Kathy Misulis, one of the professors, who makes the point that the integration promoted by the team inevitably leads to dealing with reading, writing, speaking, and listening together:

> Regardless of various instructional methodologies, the more we learn about how language is acquired, the more we learn that it should not be fragmented. It should be taught holistically. Language arts should be integrated, and there should be functional opportunities for learners to actually use language by reading and writing in meaningful kinds of activities.

Even though one professor on the team may have major responsibility for leading the class at various points, there is a continuing dialogue among the professors, and there is continuing interaction with students. The professors model exemplary teaching.

The extended time provided by the block, the pilot group's moving through the year as a cohort, and the team-teaching by three professors create a sense of community. These circumstances add a continuity to advisement, supervision, and support that is found in very few teacher education programs.

"By being in school from the very first day, the interns see how diverse individuals become a group, how teachers establish relationships with students, how they explain their expectations for students' work and behavior, how they identify and then provide for individual differences, how they set and monitor rules."

STUDENT TEACHING IN SPRING SEMESTER

When interns begin full-time student teaching in the second semester, they continue little by little to take greater responsibility as a teacher. Ultimately they assume major responsibility for teaching. All through the year they confer with their clinical instructor. During student teaching, conferences occur daily.

More Observation and Feedback

The intensity of the student teaching experience makes it a different kind of finale for clinical experiences. There is more, and more continuous, observation and feedback from the clinical instructors, who have followed the interns for the entire school year. They spend more time in the classroom with interns than is usually the case in student teaching. They serve as facilitators. Sometimes that may mean watching and listening and advising. Other times it may mean cooperative teaching. It always means helping the interns plan, assisting them in diagnosing learning difficulties, and serving as a resource person to them for materials, record keeping, and school rules and routines.

Experimentation with Teaching Style

Whereas it is not unusual for student teachers to emulate their cooperating teacher, in this program the interns are encouraged to experiment with their own teaching style. Janell Hill, an intern last year, reports,

> They assigned us topics to teach, . . . [and] of course, I had to know the curriculum, what was expected at my grade level. But within that framework, I had the freedom to shape what and how I taught, and in the bargain I had an advisor and critic at my elbow.

Participation in School Improvement

The interns also have the benefit of watching and participating in school improvement. The schools are breaking out of more traditional modes of teaching. "Instruction increasingly is guided by how children learn rather than by our merely transmitting a set curriculum," one principal explains.

> There is more emphasis on a developmental approach. We're instigating greater use of hands-on activities. We now stress visual and tactile communication as well as oral communication. There is more extensive use of manipulative materials. We have started using the whole language approach.

School initiatives like this often influence the pilot program in turn.

Introspection

More is done in the program with introspection than is usual. For example, the interns (and the clinical instructors) take the Myers-Briggs Personality Inventory to gain greater insight into their own personality type, the conjecture being that better self-understanding can promote more sensitivity to the differences in children.

Journal Keeping

The interns keep a record of their experiences in a journal. They write every day, not only about what happened—what went well and what went poorly—but about why events occurred as they did. Intern Hill's experience with journal writing and reflecting is not uncommon. She reports, "I was constantly going back in my journal to look at what had happened, at what worked. It made me realize my strengths and weaknesses. Over time it told me about my own growth and development."

The interns share their journals with their university supervisors. This provides the professors with more understanding of what the interns are experiencing and how they feel about it. Such information is particularly useful when supervising the more subtle points of an intern's performance—for example, mood, attitude, patience, body language, or sense of humor. It enables the professors to observe and consult with much more

sensitivity and insight, to tailor their counsel and comments to the growth and development of a particular individual.

Networking

The members of the cohort also share their experiences with one another, getting together regularly to talk and to exchange materials and ideas. University professors have encouraged such networking. Hill notes,

> It provided a support system among the 17 student teachers. There was comfort and nurture in knowing you could get help from 16 others who were in similar circumstances. We decided it was a good idea. Actually we shared ideas across schools.

Seminars on Special Topics

There are six seminars a year for the interns. These take place both on campus and in schools. They were designed for the group in the pilot program, but have been opened to other student teachers, cooperating teachers, and university professors. Topics such as working with teacher assistants, dealing with exceptional children, and evaluating student achievement illustrate the content of these seminars.

CLINICAL INSTRUCTORS

The clinical instructors, the teachers who do the daily supervision of the pilot group, have had special training. First they had to apply and be selected. Next they were schooled in a three-week institute. Since then, they have come to campus two or three times each semester for updates on such topics as peer coaching, mentoring, supervising novices, and conferencing.

The goal has been to find highly skilled teachers who can become exceptionally proficient in helping interns learn to teach. That result is being achieved gradually. Program director Betty Beacham observes,

> Being a good teacher does not guarantee knowledge and understanding of how to help a novice learn to teach. That truism is probably best learned through experience, and I think our clinical instructors have learned that and are affirming it.

Clinical instructors are paid a stipend for working with interns, and they each receive an allocation of funds for staff development. The model clinical teaching grant, the Student Teaching Office, and the Pitt County Schools contribute to these payments to clinical instructors.

GOVERNANCE

Two bodies representing the stakeholders in this experiment have been created to ensure collaboration and to monitor and support the program. An executive committee of school and university administrators oversees the organization and the

management of the project and is responsible for policy decisions. It meets monthly. A leadership team of education faculty and representatives from each participating school meets bimonthly to provide operational direction. The continued existence of these groups testifies to the commitment of the partners in the program. Decisions to expand from four to six participating schools, to increase the number of students in the program, to continue fiscal support from Pitt County, and to create new proposals such as electronic networking via computers also bear witness to the strength of commitment.

RESULTS

The obvious success of the program may suggest that it was effective from the start, but director Beacham observes otherwise:

> With change often comes pain. Early on, there was some confusion in getting the program under way, partly caused by changes in leadership. I guess you could say we've had a shakedown cruise, but I think we have things moving well now. I can say that because of the very positive feedback we are getting from interns, clinical teachers, our faculty team, and school principals.

Among the feedback coming in is the comment of a principal, describing a graduate whom she hired: "I would never have known she was an ICP [initially certified personnel]. I just did not have the normal problems that I have with new teachers coming out." The principal went on, reflecting on a student teacher who had just finished the program: "I'd have hired her in a minute if I'd had an opening. I've recommended her as highly as any person going out to teach."

Professor Misulis reflects,

> I'm more convinced than ever of the importance of recognizing the holistic nature of learning, not only on the part of kids in the public schools, but also on the part of college students. I think college students need many opportunities to see interrelationships among the concepts, ideas, and facts that they learn from one course to another. The model clinical teaching program has helped make that more explicit and has helped make me increasingly sensitive to that as a faculty member.

Another member of the staff says, "The greater my involvement with this program, the more I'm thoroughly convinced that we need additional opportunities for rich field-based experiences and more direct application of what we learn in college classrooms to what happens in schools."

A formal evaluation by an outside person is under way. The evaluator has gathered information from interns, clinical instructors, and the project's leadership team (principals, university faculty, and administrators) using focus groups, one-on-one interviews (with selected interns and clinical instructors), and a written questionnaire. Data are still in raw form. However, reactions from respondents clearly fall into four categories: (1) the effects of the program on students preparing for a teaching career in the elementary school, (2) the effects of the program on clinical instructors, (3) the implications of the model for the traditional program at ECU, and (4) general reactions. The findings will ultimately lead to changes and improvements.

Elizabeth City State University
and the Public Schools of Gates and Pasquotank Counties

Two ideas serve as the centerpieces of the model clinical teaching program at Elizabeth City State University (ECSU): reflective teaching and the greater use of summers for teacher education. The reflective teaching idea is drawn from the work of Donald R. Cruickshank; the greater use of summers for teacher education, from a recommendation of the UNC Task Force on the Preparation of Teachers.

REFLECTIVE TEACHING

Cruickshank[1] uses Valverde's concept of reflection and Dewey's depiction of reflective thinking as the foundations for his notion of reflective teaching. Valverde describes reflection as "a form of slightly distorted self-evaluation—distorted in the sense that judgment is emphasized rather than data collection. . . . [It] is an individual's needs assessment and continued self-monitoring."[2] Dewey portrays reflective thinking as "active, persistent and careful consideration of any belief or supposed form of knowledge in the light of the grounds that support it and the further conclusions to which it tends."[3] Cruickshank contends that teaching is so difficult and complex an activity that it requires constant reflection. He believes that anyone learning to teach should be trained in the process of reflection, and the earlier this training occurs, the better, because research indicates that reflection is a developmental process. Cruickshank recommends that training in reflective teaching take place throughout teacher education and that some exercises in the process be simulated.

ECSU has adapted the Cruickshank idea to student teaching, that is, to actual teaching situations rather than to simulated ones. In the ECSU adaptation, videotape is used to capture the performance of the student teacher. The performance is then analyzed once a week by the university supervisor, the cooperating teacher, and the student teacher, using a set of questions to guide thought and reflection. The student teacher is invited in this way to reflect on his or her teaching with the assistance of two experts. The recordings of teaching episodes

1. D. R. Cruickshank, *Reflective teaching: The preparation of students of teaching* (Reston, VA: Association of Teacher Educators, 1987).
2. L. Valverde, The self-evolving supervisor, in T. Sergiovanni (Ed.), *Supervision of teaching* (pp. 81–89) (Alexandria, VA: Association for Supervision and Curriculum Development, 1982), p. 86.
3. J. Dewey, *How we think* (Chicago: Henry Regnery, 1933), p. 9.

"The review of the student teacher's performance encompasses all phases of teaching behavior. The focus is deliberate and thoughtful analysis and evaluation. The intent is both to critique the performance and to guide the student in developing the process and the habit of reflecting."

can be played back, as with instant replay in a sports events. Often behaviors and situations are discovered in replays that would have been lost in live observations in the classroom. In replays the novice and the experts can address any number of queries and reflect on possible answers: Why did a technique work or not work? Were there alternative or better ways to proceed? Did the student teacher prompt youngsters to identify and test assumptions, to seek conflicting evidence, to compare and contrast information and opinions, to resolve problems? Was inquiry emphasized as a tool for learning? And so on.

A byproduct of the videotaping is a collection of selected episodes that are used (with the subjects' approval) in methods classes to demonstrate effective techniques. This is an unusual way to bring clinical experiences into the college classroom. It may be doubly effective because the subjects of the videotapes are peers of the viewers of the videotapes. This makes the prospect of matching the subjects' achievement more realistic than if the subjects were veteran teachers.

The review of the student teacher's performance encompasses all phases of teaching behavior. The focus is deliberate and thoughtful analysis and evaluation. The intent is both to critique the performance and to guide the student in developing the process and the habit of reflecting. Lois Green, director of the program, states it this way:

> Cooperating teachers and university supervisors provide the guidance and analysis to bring the student teachers to a reflective level at which they can criticize themselves and gain new insights into their teaching behaviors. Prospective teachers see and respond to their own methods of teaching; they do not just mimic the methods of other teachers.

GREATER USE OF SUMMERS FOR TEACHER EDUCATION

The program's greater use of summers for teacher education is less complicated a feature than reflective teaching is. It is merely a matter of bringing student teaching into summer school classes already required by the state's Basic Education Program. Gates and Pasquotank counties offer summer school for students from the 1st through the 12th grade. The courses are largely remedial; however, at the secondary school level a small percentage of students are enrolled exclusively for enrichment.

Eligibility

Applications to participate in summer student teaching are due the previous October. Candidates must have followed prescribed programs of study for the education major and a selected second major, and must have completed at least two-thirds of both majors with a cumulative grade-point average of 2.5 or better. They must also have earned a minimum grade of "C" in

each professional education course. National Teacher Examination (NTE) scores are reviewed, and a personal interview is conducted.

The program also accommodates people who already have a bachelor's degree and seek certification only. They must have a grade-point average of 2.5 and the equivalent of at least a minor in the academic discipline in which they want to be certified. Further they must satisfy by course or equivalent the requirements of the appropriate professional education sequence. Certain minimum scores on the NTE, passing scores on an aptitude test in mathematics, speech, and writing, and an interview are required as well.

Pre–Student-Teaching

Summer student teaching is the culmination of clinical experiences. Preparation for it begins in March, when students start observing classes part-time at the grade level and in the subject that they plan to teach, with the person who will be their cooperating teacher. Complementing this eight-week observation experience is a workshop called Contemporary Issues and Trends in Education, offered during the spring semester. In May, observation expands into a full-time activity, and students also begin to participate in minor teaching tasks.

Student Teaching

Full-time student teaching occurs in June and July for 5–6 weeks. The sessions are concentrated, requiring a close working relationship between the cooperating teachers and the student teachers. Classes are usually smaller than they are in regular school, providing more time for work with individuals and small groups. The cooperating teachers are typically in the classroom all the time and in constant touch with the student teachers. Working with veterans and receiving continuous guidance makes this clinical experience different from traditional student teaching. The result is often a much closer relationship between the master teacher and the trainee.

By the end of the project's third summer, 28 students had completed their student teaching under its auspices, 9 the first summer, 12 the second, and 7 the third.

SELECTION AND TRAINING OF COOPERATING TEACHERS

The cooperating teachers are selected by the summer school principal, the summer school director, and the program director. They must have at least three years' experience in the classroom and appropriate certification. Further, along with university supervisors and student teachers, they must participate in a workshop on reflection before the summer session begins.

The cooperating teachers are evaluated each year. Those who have demonstrated a commitment to the concept of reflection

and are able effectively to guide student teachers through the process are invited to participate again.

RESULTS

Cooperating teachers, university supervisors, and student teachers report that they find summer student teaching to be a microcosm of teaching, more so than regular student teaching is. They maintain that it brings the teacher-to-be closer to the reality of teaching. In the short summer session, student teachers are able to begin, carry out, and close school—with the paperwork involved, the parent conferences, the report cards, etc. "It's an all-encompassing exposure to almost everything a teacher does," says Bettie Parker, a cooperating teacher in Northeastern High School.

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Student teachers attest to the value of reflecting on the content appropriate at different levels of learning and the behavior of youngsters at different levels of development. University supervisors tell of student teachers having more opportunity for hands-on experiences. Cooperating teachers and university supervisors variously indicate that the summer school student teachers have slightly fewer or far fewer discipline problems than their regular school counterparts do.

School administrators admit an interest in hiring graduates of the program. Travis Twiford, superintendent of Pasquotank County, testifies that summer student teachers are well prepared, that he is pleased with the program, and that he has hired a number of graduates, based on their student teaching performance.

School and college personnel report an improvement in working together in their partnership. A serendipitous outcome has been the effect on cooperating teachers, who have learned to be more reflective about their teaching.

James Hedgebeth, chair of the Division of Education at ECSU, comments,

> Reflective teaching in the model summer student teaching project has proven to be a valuable and effective component of pedagogical training. This clinical method will be integrated more into the regular teacher education program, thereby fostering greater collaborative relationships with public schools in all aspects of the teacher education program at ECSU.

Two external evaluators have been hired to assess the project. They are providing opinions, illustrations to substantiate their opinions, and recommendations for strengthening the program.

More formal evaluation is under way. A researcher has been engaged to analyze the data that have been collected and, using the videotapes, to assess the students' degree of growth over the student teaching period. The researcher is being aided in the latter task by experienced mentor teachers who have not been involved in the summer school program. The report of this study will be available in January 1992.

BYPRODUCTS

Conferences

Two one-day conferences for public school personnel in northeastern North Carolina have been held to disseminate the project's experience. The 1990 theme was Reflectivity in Teaching, the 1991 theme, Strengthening Teacher Education.

Follow-Up

Questions have been raised about the atypical student population and the abbreviated time for student teaching in summer session. Consequently, in spring 1991 the program director initiated a study to follow summer student teachers into their induction period. The study has two objectives: (1) to assess the progress of novice teachers in reflective teaching during their induction and (2) to ascertain the degree to which teaching skills transfer from the atypical population of the summer school to the more typical population of the regular school. The novices in this follow-up study are keeping a daily journal. They are also being videotaped. In conferences that follow, the videotapes are being reviewed with the novices' university supervisors and mentor teachers. Those conferences too are being videotaped. The researcher will review and evaluate the videotapes from both the induction period and summer student teaching.

North Carolina State University
and the Public Schools of Durham, Rocky Mount, and Weldon Cities
and Durham, Granville, Halifax, Johnston, Lee, Nash,
Northampton, Vance, Wake, and Warren Counties

The model clinical teaching program at North Carolina State University (NCSU) is developmental in orientation and embraces a wide span in the long process of learning to teach. It extends from preservice students examining the complexities of teaching, to beginners receiving clinical assistance in the first two years on the job, to clinical faculty learning to be skilled supervisors of prospective and novice teachers.

The program features clinical experiences as an integral part of an introductory/career exploration course, methods courses, and student teaching. It also includes experimentation with beginning teachers and employment of clinical faculty with joint appointments in school and university.

ORIGINS IN MENTOR TRAINING

Much of the clinical activity that occurs under the auspices of the model clinical teaching grant results from lessons learned and insights gained in an NCSU program designed to help selected veteran teachers become support people—mentors—for beginning teachers. Initiated in 1985, the mentor training program is a two-semester course in which content and procedures for helping novices are identified, demonstrated, and then tested. The directors of the program designed learning experiences, curricula, and training based on theoretically relevant criteria with established empirical validity. In the tradition of John Dewey, the program applies the cognitive-developmental assumptions of growth in stages to an emerging instructional framework for novice teachers and teacher educators. This framework includes two strands:

	Conditions for Growth	Conditions for Skill Development
1	Significant new experience	Theory/rationale
2	Guided reflection	Demonstration
3	Balance between experience and reflection	Practice with feedback
4	Support and challenge	Adaptation and generalization
5	Continuity in all of the above	

The approach employs the philosophy of developmental supervision, as well as theory and research drawn from studies of adult learning. Units of study address the various elements of effective teaching and developmental supervision. These elements are documented in a manual distributed to teachers taking the mentor training course. The first semester entails a weekly three-hour seminar in which the various recommended

approaches to teaching are used by mentor trainers. The second semester involves a practicum in which teachers practice, record, document, and evaluate the supervisory and teaching techniques that they have learned during the first semester, with close supervision and evaluation by a mentor trainer.

The mentor training is unique in at least two respects: (1) It occurs in the local school system, and (2) it uses the multiplier effect to enlarge the cadre of mentors. In the early years the mentor training course was taught by NCSU professors. As more and more teachers have completed the course, however, several have been selected by their local directors of staff development and the NCSU professors to become mentor trainers themselves. These teachers register at the university for a two-semester internship in which they team-teach the mentor training course. Continuity is ensured by teaming each trainee with the university professor who originally taught him or her in mentor training.

All mentor trainers become members of the NCSU Mentor Network and meet twice a year with staff development directors from the participating school districts, NCSU faculty, and personnel from the state department of education. A semiannual newsletter promotes further communication. Mentor trainers may also be invited to participate in methods courses, to organize workshops for cooperating teachers who have not completed the mentor training course, and to become clinical professors jointly appointed by their school district and NCSU.

ADAPTATION TO PRESERVICE EDUCATION

Over several years the performance of mentors in assisting beginning teachers so captured the attention of university and school people that some obvious questions arose: Could some of mentor training be modified to enhance the university's preservice program? Could the teachers who become mentor trainers serve as clinical faculty?

The adaptation of the mentor training program to courses and field experiences in NCSU's preservice program was intended to bring more continuity to the preparation as well as the induction of teachers. Beginning clinical experiences in the undergraduate years, the developers thought, would help to provide an uninterrupted connection between study and practice, essential to preparing for a job as complex as teaching.

Introductory Course

With funds from the model clinical teaching grant, mentor trainers were employed to revise the curriculum for the introductory course in education. The revision included adding guided observation and reflection. Both were needed to incorporate the conditions essential for growth and to get students inside

the role of the teacher. In the course, students examine a rational basis for understanding the teacher's role; then in a clinical assignment they observe and try assuming some of the functions of a teacher.

The course is typically taken by sophomores and juniors and is designed for a broad range of students—not only those who have already selected teaching as their vocation but also those who think they might be interested in it. About 200 students, in classes of around 25 each, take the course every semester. All are exploring middle and high school teaching, the levels for which NCSU prepares teachers.

"In the introductory course, students examine a rational basis for understanding the teacher's role; then in a clinical assignment they observe and try assuming some of the functions of a teacher."

The clinical part of the course is an eight-week stint—three hours a week—in a school classroom. Professors recommend that the three hours be in a block. The assignment gives students a chance to examine life in the classroom from the teacher's viewpoint. They serve as observers and assistants.

The experience is guided. Using material drawn from the manual for mentor teachers, professors have prepared a manual for students to make required experiences explicit and to provide background rationale and theory. Students are given specific activities or phenomena to observe and probe, such as school climate, classroom management, and questioning techniques. Toni Parker, one of the instructors, says,

> You'd be amazed at how much these students look at teaching from a student's standpoint. . . . We give them specific things to observe and reflect on so that they begin to recognize what effective teaching is and what qualities and skills are required to be a competent teacher.

Students take notes on what they observe and keep a log on what they do. Further they write a case study on a youngster who piques their interest or one whose behavior the teacher suggests would be instructive to watch and ponder.

Professors remark that they wish the course could be longer. Parker is clear about her reason for that wish:

> When the course starts, they talk about ideas from a student's perspective. By the end of the course, when they've come back from the school experience, they've begun to discuss school and teaching issues from the teacher's perspective, in a really substantive way and in a way that's more carefully thought out.

The teachers with whom students have their eight-week clinical assignment function largely as facilitators. A guidebook

for these teachers was developed by the same mentor trainers who introduced guided observation and reflection into the students' manual. The teachers make sure that students have a chance to observe what the university requires. For example, they alert students to when they plan to focus on a particular teaching technique, such as positive reinforcement, active listening, or cooperative learning, or to when they will teach a lesson in which there will be a lot of student interaction.

Professors expect students to take responsibility and initiative for establishing productive rapport with the classroom teacher, and in most cases students develop a close relationship with their teacher host. Students are told to meet with the teacher before they start observing. Often they are quite nervous about this initial encounter. But, says Parker,

> getting over that anxiety is part of what we want students to learn. It's one of a set of tasks, none of them easy, that we expect students to accomplish. Only one or two students have complained about too much structure—or have found expectations too difficult. I've never had anyone tell me it wasn't worthwhile.

Methods Courses

At NCSU, methods courses and student teaching take place in the same semester, the first 6 weeks being devoted to study of methods, the final 10 weeks to student teaching. In both experiences prospective teachers are helped to come to terms with the different kinds of youngsters with whom they must deal in schools.

The clinical dimension introduced into NCSU's methods courses as a result of the model clinical teaching grant entails involving middle and high school teachers in the campus-based instruction. These teachers bring the real world of the classroom to the study of how to teach. They also bring teaching ideas and demonstrate a variety of techniques. Most have completed the two-semester course qualifying them as mentors or the two-year internship qualifying them as mentor trainers. They are masters in teaching their subject, and they are experts in working with people who are learning to teach. In some cases they work with the same students later in student teaching.

Videotapes of exemplary strategies for teaching agriculture and English, developed through the model clinical teaching program, are used in the methods courses.

Student Teaching and the Training of Cooperating Teachers

The conviction at NCSU is that the quality of support and assistance provided to the student teacher determines the effectiveness of the student teaching experience. The commitment to high-caliber supervision is another spin-off of the NCSU mentor

training program. As a consequence of that program, the university has gradually moved to provide additional special training for cooperating teachers. "We created another level of training to prepare cooperating teachers who did not wish to go into the one-year program to become mentors, but wanted additional training," explains Lois Thies-Sprinthall, director of NCSU's model clinical teaching program. "Some professors already provided this level of assistance to cooperating teachers. Funds from the grant encouraged *all* professors to do so." Professors who supervise student teachers are paired with teachers who have become mentors or mentor trainers. Together the two conduct three workshop sessions that cooperating teachers attend during the semester in which they work with a student teacher. "Systematically built into these workshops," Thies-Sprinthall says, "are activities that give cooperating teachers skills in such techniques as modeling, coaching, and being both a support and a challenge to the student teacher." The mentors and the mentor trainers are paid a stipend for their contribution.

The goal is a three-year assignment for cooperating teachers (some districts have already established this) during which they participate in the three workshop sessions on campus each year to further develop their skills in supporting and supervising student teachers. Cooperating teachers from seven counties now have the opportunity to participate in these workshops.

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Attention from Subject-Matter Professors

When the model clinical teaching program became a reality, many subject-matter professors working with student teachers expressed an interest in knowing more about mentor training and in adapting parts of it to the training of cooperating teachers. They arranged to be released from the teaching of one class to go through the mentor training with schoolteachers in their subject. Many professors already knew the teachers in the mentor training course from prior contact as advisors in the master's program.

The purposes for the professors were, first, to familiarize themselves thoroughly with mentor training, and second, to extrapolate selected concepts and procedures for use in training cooperating teachers. Obviously, teachers too saw the significance of the mentor training for student teaching, and subsequently some of the teachers completing the course became cooperating teachers.

Jack Wheatley, one of the science education faculty, reports, "The mentor training has moved the work of the cooperating teacher from an intuitive process to one that is more rational." The sequence of events that the cooperating teacher provides for the student teacher is now more responsive to the

needs of the student teacher than it was before. The supervision is more carefully thought out. "For example," says Wheatley,

> prior to an observation, the cooperating teacher talks about what is going to occur, what kinds of things the novice should look for. After an observation, both novice and cooperating teacher take time to reflect about what has happened—before they have their follow-up conference. As a result, analysis is a lot more rational and based on careful reflection.

An important result has been a clear recognition that student teaching and the first year of teaching are different and require different approaches by support personnel. To acknowledge that difference, a manual has been developed for student and cooperating teachers, again with material adapted from the manual for mentors.

UNIVERSITY-SCHOOL COLLABORATION

With the model clinical teaching program has also come better collaboration between school and university and essential personnel to bridge that relationship. NCSU started with one clinical professor, Alan Reiman. Drawn from the Wake County school system, Reiman is a former mentor trainer who has completed a doctorate at NCSU. His position is a joint appointment: Half his salary is paid by the school system, half by the clinical teaching grant. He helps to link the interests and the concerns of his two employers—for example, modifying and teaching the introductory course for prospective teachers to improve preservice training, and teaching the mentor training course to help the school system provide better induction for beginning teachers. The arrangement also provides a liaison between school and university that attends to both separate and common interests and agendas.

RESULTS

A number of concrete developments attest to the success of the program, and to shortcomings. Attesting most prominently to success is the continued and growing attention that subject-matter professors give to the program and their endorsement of the results they observe in their students. Their adaptation of mentor training materials and procedures to the training of teachers in subject-matter areas is further evidence of effectiveness. Wheatley expressed his endorsement of the program as follows:

> If the long-range goal of the program is to improve the education system in North Carolina, it should be recognized that the training of teachers through the model clinical teaching program makes a difference in the competence of preservice teachers and how they fit into the system and learn how to assume their role as educators. Student teachers

linked with trained cooperating teachers and mentors get a much different, much better program. Not only do they learn from the cooperating teachers and mentors; the process makes the cooperating teachers and mentors better—they learn from the student teachers.

Similarly, at the school level the continuing interest and involvement of teachers in being trained to work with student teachers and the numerous requests by school systems for the two-semester mentor training program confirm the value of both efforts. The desire of mentors to become mentor trainers is another affirmation. The success of mentor trainers in increasing the number of teachers available for clinical teaching duty as cooperating teachers and as mentors is still further validation of the program's value and effectiveness. Mentors are now being sought out by colleagues who want a coach to help them renew their teaching effectiveness.

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Some shortcomings are evident in the failure of two efforts: (1) a pilot program to follow five student teachers into their year of induction and (2) a support group for student teachers to promote the conceptual and ethical dimensions of teaching. A late start and scheduling problems mitigated against the success of the pilot induction program. Nevertheless faculty would try it again under different circumstances. The support group for student teachers was discontinued because it became too difficult to organize and probably was premature when tried. However, it remains an idea of interest to several professors and may be attempted again when the situation appears more favorable.

Research

Research has also been a part of examining outcomes. Two doctoral studies and at least eight faculty studies have been conducted on various aspects of the program—for example, (1) trends in ethical reasoning among experienced teachers who were instructed and supported in guided reflection, conceptual reasoning, and levels of concern; (2) the effects of a support group during initial teaching experiences; (3) the practice of coaching and developmental supervision among exemplary and novice teachers; (4) cooperating and mentor teachers' ability to recognize effective communication responses; and (5) the instructional behavior of student teachers as a result of participation in a concerns-based support group.

An interview study of beginning and mentor teachers conducted by two faculty explored the impact of mentor training on mentors' performance. The report, available in three sections (two of which have already been published), provides significant information on which aspects of training are most often applied and suggests why some aspects are not applied.

Salem College
and the Public Schools of
Winston-Salem/Forsyth County

Across the country, student teaching is almost uniformly an experience that occurs during the academic year. At Salem College, however, it is also taking place in the summer to help an atypical group of people meet the requirements for certification. Salem's Summer School Student Teaching Program serves a cross-section of undergraduates and graduates. Most of them are older than the typical college student. Several have a liberal arts degree and are seeking preparation to teach in Salem's Master of Arts in Teaching (MAT) program. Others need more time to complete a major in one of the arts and sciences and still finish in four years.

STRUCTURE

In the program, student teaching is split into two five-week segments over consecutive summers. For undergraduates the initial assignment takes place between the junior and senior years, and the second one follows the senior year. For graduate students the two stints come at the beginning and the end of their intensive one-year and two-summer MAT program.

For both undergraduate and graduate students, the clinical experience of the first summer is followed by a year of course work. This intervening academic year provides time for students to reflect on the lessons that they have learned in their first assignment and to apply the experience to further study.

The second summer of student teaching then offers students one more time to test their skills and abilities in a clinical environment before completing preparation. This advantage is seldom available in teacher education programs; student teaching usually comes late in the senior year, and there is little or no time before graduation to reflect on or attend to the lessons learned.

Completing requirements for certification as a teacher and fulfilling requirements for the bachelor's degree are separate activities in this pilot program. As a consequence, scheduling the second five weeks of student teaching to occur immediately following graduation from college is not problematic.

PLACEMENTS

The first summer of student teaching is done with students in remedial classes, the second summer with students in enrichment programs. The two assignments provide exposure to different situations and several types of students. The remedial

> *"As the program has developed, more responsibility has been delegated to the on-site teacher educators for supervising and evaluating the student teacher. . . . The rationale . . . is that they are the professionals who are with the student teacher on a daily basis; they are best positioned to provide immediate and continuous feedback."*

classes enroll students who are required to attend summer school as part of the Basic Education Program of the Winston-Salem/Forsyth County school system. Instruction is mainly in basic skills. Most of the students are from lower socioeconomic levels and disadvantaged families. Many are at-risk, and some have behavior problems. The Winston-Salem/Forsyth County enrichment program mostly enrolls privileged youngsters, who are ostensibly in summer school voluntarily. The focus of enrichment is stimulation and challenge in the fine arts, language arts, mathematics, science, and social studies.

Student teachers are at school from 8:00 a.m. until 4:00 p.m. each weekday. The classes are smaller than those in the regular school year, and teaching is different because much individual help is given. Teachers are also more flexible and willing to try new strategies for learning.

In addition to their school responsibilities, student teachers attend weekly seminars with the program coordinator. They receive a stipend for participating in the program.

ON-SITE TEACHER EDUCATORS

Over their two summers in the program, the student teachers work with two cooperating teachers, called on-site teacher educators. These are carefully selected professionals who have experience working with teachers-in-training.

As the program has developed, more responsibility has been delegated to the on-site teacher educators for supervising and evaluating the student teacher. For instance, on-site teacher educators are now required to make at least two formal observations of the student teacher per week (after the first week), with a follow-up conference after each observation. The rationale for giving the on-site teacher educators more responsibility, says Dorothy Russell, chair of the Department of Education and director of the program, is that "they are the professionals who are with the student teacher on a daily basis; they are best positioned to provide immediate and continuous feedback."

Two steps are taken to ensure first-class performance by the on-site teacher educators. First, they are carefully selected, based on recommendations from their principal and fellow staff. Second, they are required to attend a two-day workshop on clinical supervision before the summer session, and to attend weekly seminars during the session. Workshop content includes an orientation to Salem's teacher education program, developmental supervision, student teachers' concerns, theories of adult development, skills in conducting conferences with student teachers following observations of them, and the use of different observation instruments, including the North Carolina Teacher

Performance Appraisal Instrument (TPAI). On-site teacher educators receive a stipend in addition to their summer-session teacher's salary.

Student teachers attend the second day of the on-site teacher educators' workshop. There they meet the teacher with whom they will be working, and the two have some time to plan the student teacher's initial teaching responsibilities.

COLLEGE COORDINATORS

The role of the traditional college supervisor in the program has been refashioned as one of coordinator. Also, the role has become more one of support person to the on-site teacher educators than one of supervisor of student teachers. The coordinator serves as a consultant and a resource to the on-site teacher educators and makes classroom visits once a week. He or she also conducts weekly seminars with the on-site teacher educators.

Despite this change of traditional roles, program director Russell reports,

> it is difficult for the college supervisor to withdraw from the customary role of supervisor of student teachers and become a consultant to the on-site teacher educator. Also, despite training in a two-day workshop, on-site teacher educators are reluctant to take on more supervisory responsibility, especially the summative evaluation of the student teacher.

RESULTS

An assessment of this pilot program by an outside evaluator was completed in each of the first two years, and one is in process for the third year. Student teachers and on-site teacher educators have been surveyed before and after the program on (1) their reasons for participating, (2) their goals as participants, (3) their perceptions of the strengths of the program, and (4) their concerns about the program.

The reasons for participating given by student teachers in the first two years ranged beyond the faculty's original intentions of providing time to complete a major in the arts and sciences or to complete requirements for certification. Both first- and second-year students cited the economy of the arrangement—either its making certification possible earlier or its leaving them more time during the year to fulfill requirements for the major. They also applauded the program's innovativeness, uniqueness, or special experiences. Further, they reported that the program fit in with their work plans or provided a stipend or other aid to their financial situation. Other reasons included their preferring two teaching experiences or smaller classes. Similar reasons were given in goals for continuing the program.

The reasons given by on-site teacher educators for participating in the program included wanting an opportunity to broaden their knowledge through contact with the fresh ideas and the enthusiasm of student teachers, more experience as a supervisor and a mentor, a chance to redefine their goals and philosophy, and an opportunity to explore becoming a college professor and supervising student teachers.

The survey also revealed that a majority of the student teachers were nontraditional students who had attended other colleges before enrolling at Salem. Most had had experience in a school setting before student teaching. Several had completed some form of professional development related to teaching.

The major concerns that participants in the first two years cited were doubts about summer student teaching's being enough like academic-year student teaching (e.g., in class size), doubts about students' needs being met in so short a time, uncertainty about what to expect from a particular age group, and uncertainty about their knowledge of subject matter and ways of presenting it.

One of the unusual aspects of the assessment was having student teachers evaluate their clinical mentors, the on-site teacher educators. In general, the student teachers attested to the teacher educators' competence in instructional presentation, classroom management techniques, effective interactions with students and others, and mentoring. However, the student teachers indicated that the on-site teacher educators could have allowed for more planning time with the student teachers, could have shared more evaluative information on the lessons that the student teachers taught, and could have given more direction at the beginning of the student teaching experience.

On a 5-point scale ranging from "always" to "never," the college coordinators were viewed by all of the on-site teacher educators as always effective. All of the first-year and three-fourths of the second-year student teachers found their seminar with the coordinator to be effective always or almost always. Overall, in the second year 78 percent of all participants judged the program to be effective all or most of the time.

The program has not been under way long enough to measure the success of graduates in full-time teaching positions. Data are being gathered, and meetings with graduates have taken place to begin such assessment.

The University of North Carolina at Asheville and the Public Schools of Asheville City and Buncombe County

An uncommon feature of the model clinical teaching program at The University of North Carolina at Asheville (UNC–A) is its getting university faculty into school classrooms and schoolteachers into college classes, in both cases to help teach and guide prospective teachers. In schools the familiar role of professors, usually education faculty, is to supervise student teaching. In the UNC–A project the role of both liberal arts and education professors is also to work with schoolteachers in subject-matter areas. In return, selected schoolteachers help professors plan and teach college courses.

As yet these sorties of professors and schoolteachers into each other's domains occur most often in professional education, but they are gradually developing in history, literature and language, mathematics, and theatre arts. Professors in the liberal arts are working with teachers in their subject. They are also teaching or team-teaching courses in their subject to prospective teachers. In other areas, such as reading, creative arts, and drama, teachers and professors together plan and teach courses in how to teach their particular subject matter.

PARTICIPATING TEACHERS

The clinical aspect of the program is effective because the master teachers with whom students work are carefully selected. They can guide, counsel, and advise students in all phases of clinical experience: observation of teaching, participation in teaching, student teaching, and induction into teaching. They are able to model and illustrate various aspects of teaching. They can explain, analyze, and evaluate in-school practice and college courses. They work well with professors and other support people who are helping novices learn to teach.

PARTICIPATING STUDENTS

The model clinical teaching program includes all UNC–A students who are seeking a liberal arts degree and teacher certification—about 40 each year. For regular students the program in education begins in the junior year. For Teaching Fellows[1] it begins in the first year. Expectations and standards for both

1. The Teaching Fellows are selected students supported by an allocation of funds from the state legislature. Each receives a grant of $5,000 a year for four years and must make a commitment to teach at least four years in the public schools of North Carolina.

groups are essentially the same. However, the Teaching Fellows spread their work in education across four years.

CLINICAL EXPERIENCES

In their first clinical experience UNC–A students usually go for a conference with a master teacher and then perform about 10 hours of guided observation in a classroom. The observation experience takes place for 30–40 minutes once a week for 9–10 weeks. Next the students do some teaching, some one-on-one tutoring, or some work with small groups. Master teachers oversee these activities, and the students keep a journal, which they share and discuss with their master teacher and a university professor.

> *"'The philosophy of the program is that teaching is more than lecturing, and we illustrate that by how we teach. There is some lecturing in college courses, but there is more work in small groups and in cooperative learning. We want to show students as many teaching methods as we can and let them experience different approaches.'"*

The UNC–A teachers-in-training watch and study many teachers and much teaching. They have frequent chances to see what teachers are. In addition to connecting observation and attempts at teaching to discussions of theory, they take Effective Teacher Training. "The philosophy of the program is that teaching is more than lecturing, and we illustrate that by how *we* teach," says Joan Lance, director of the program. "There is some lecturing in college courses, but there is more work in small groups and in cooperative learning. We want to show students as many teaching methods as we can and let them experience different approaches."

As a result, students have some complaints about North Carolina's Teacher Performance Appraisal Instrument (TPAI). According to Lance,

> The students say, "We have to learn this method and do these lesson plans, which essentially dictate that we stand in front of the class and direct instruction, yet you tell us we can work out any reasonable plan that will accomplish a sensible learning objective."
>
> We say, "You can use the TPAI and the six-step lesson plan. That doesn't mean you need to stand in front of the room, except perhaps to introduce an activity. You can have the kids in a circle or some other arrangement. Guided practice need not be dictated. You can use cooperative methods and involve students in decisions."

Knowledge of teaching and learning is illustrated and replayed for analysis in clinical experiences. When students teach or participate with a master teacher in clinical assignments, they are often videotaped. They bring the tapes back to seminars and methods courses for review by groups and individuals. Strengths and weaknesses are identified, and the information is used in determining the students' next clinical assignments.

CONTINUITY WITH THE FIRST YEAR OF TEACHING

Another uncommon feature of the UNC–A program is its extension of involvement with students into their first year of teaching. "We don't cut off students after they graduate," reports Charlie Reed, chair of the Department of Education. Because most graduates stay in the region, they are able to work out a professional development plan (PDP) with a university professor, which involves a project to be pursued during the summer between graduation and their first job. When possible, a mentor teacher and the principal in the school where the beginner will teach help design the PDP. The mentor is sometimes the cooperating teacher with whom the graduate worked during student teaching. Materials for the project are provided, and the new teacher and the mentor receive a stipend for their summer work.

PDP projects typically focus on materials or units of study that can be used when school starts. Examples are a third-grade teacher's working out a unit on computers with the program *Time & Money*, and a high school teacher's planning instruction in world history using a game called *Where in the World Is Carmen Sandiego?* New teachers always lack the ready supply of teaching materials that veterans build up over time. The PDP project gives the novice a leg up on developing a repertoire.

RESEARCH TRAINING AND EXPERIENCE

The PDP project is not a first-time research-and-study effort. Prospective teachers at UNC–A take a research course in the junior year, which involves not only learning research skills but completing a research project. The students observe in classrooms and gather data while they look for a research topic. When they have identified one, university faculty take care to match them with a cooperating (master) teacher with whom they can confer in shaping and obtaining approval for their research. A recent example was a study of multicultural literature and its uses in the classroom.

Students complete most of their research before going into the school for 16 weeks of student teaching, during which they use, apply, or adapt their research to actual teaching. When the research and the student teaching have been completed, the whole experience is reviewed in a research presentation that the student makes, which is attended by professors, other students in the program, and schoolteachers.

RESULTS

There are many indicators of the program's success. A number are apparent in the preceding narrative. Others include the positive effects on master teachers, the learning from other model programs through networking, students' "adoptions" of schools and youngsters, and extensions into tutoring, collaboration, and technology.

Positive Effects on Master Teachers

Master teachers report both receiving stimulation and gaining prestige from participating in the model clinical teaching program. One said, "I'm getting some new ideas from these youngsters." Professors recognize that "practicing teachers need nurturing," says program director Lance. "Coming into the university gives teachers recognition besides pay. They are acclaimed by the university and recognized by their principals." One principal commented, "I'm glad you used her [a particular teacher] because it seems to have revitalized her. She needed more than a regular classroom experience; being able to do something beyond that has given her a boost."

Learning Through Networking

Part of the orientation that master teachers receive is training as teacher educators, using the materials on mentor training developed by Lois Thies-Sprinthall in the model clinical teaching program at North Carolina State University. This illustrates one benefit of networking among projects.

Students' "Adoptions" of Schools and Youngsters

In their sophomore year, after visiting schools and interviewing principals, the Teaching Fellows adopt a school in which they believe they can make an impact. They develop a plan that the principal and their professor must approve. Then they are turned loose to undertake actions that promise to do the most good.

In their junior year the Teaching Fellows adopt a multicultural student, usually one who is non-English-speaking. They tutor the student for a semester, as well as serving as a Big Brother or a Big Sister.

Tutoring Project

A significant extension of the clinical teaching program is a project in tutoring functionally illiterate middle school children. Last year 20 prospective teachers, selected from volunteers, were specially trained in tutoring and worked three mornings a week with seventh-grade students who were reading four grades below grade level. The tutors were matched with teachers in the middle school who oversaw their work and to whom they reported on the students' progress.

In the beginning, despite three months of special training, the tutors were uncomfortable. Some felt very unhappy about their relationship with their students. The concern was not that the students were not doing the work, but that they were not opening up to the tutors' ideas and creative thoughts. This was so despite the fact that each tutor worked with only two students. Most of the youngsters were from disadvantaged homes, and they did not welcome outsiders, particularly initially. Most also were boys, primarily from minority groups—Afro-American or Hispanic.

It took about six weeks for the students to open up and for the tutors to understand how to work with their charges. Gradually the tutors began to be truly effective, and the students developed trust, enthusiasm, and self-esteem. Much of the progress that the students made, such as in attitude, was not quantifiable. However, the rich data in tutors' and students' journals and the records of the professor in charge are being assembled for dissemination.

The regimen for tutors required careful lesson planning. The focus was on literacy, reading, writing, speaking, and listening. Tutors used the whole-language approach, and computers were employed for writing. Because the middle school students were not computer literate, they first had to learn how to run a computer. This required that the tutors write and implement very basic lesson plans in computer use and then assist their students in becoming acquainted with *Bank Street Writer*, a word-processing program.

The tutors also tried to broaden the horizons and enrich the awareness of their students through out-of-class activities, which helped build rapport. They took the students to UNC–A basketball and baseball games and brought the students to campus to see where they lived and what the dorms were like. They introduced the youngsters to the university library. Finally the tutors sponsored a hot dog dinner for the middle schoolers and their families, which brought together over a hundred people.

A variety of techniques have been employed to monitor, analyze, and evaluate the tutors' work: review of their journals; videotaping sessions and subsequent review and analysis of tutors' performance; tutors reporting to their students' regular teachers; and an evaluation at the end of the year. In research now under way a control group of students in another school has been identified, and data have been collected to compare the progress of the tutored and untutored groups. A professor is following all of the tutors to see what happens when they begin student teaching.

Corporate and business funding has been assured to continue the tutoring project for the 1991–92 academic year. Twenty-one tutors and 32 middle school at-risk students have already been identified.

Collaboration

As a result of the model clinical teaching project, collaboration with schools has been expanded. For example, agreement has been reached, after meeting with the county superintendent, to match university professors with schools as a county

plan for restructuring gets under way. To date, a theatre arts professor, a math professor, and a science professor have been paired with schools.

Innovative Uses of Microcomputers

Still developing are innovative uses of the microcomputer. Under the umbrella of the model clinical teaching program and with additional funds from the state department of education, experiments are under way in using microcomputers and microcomputer networks between the university and local public schools and between local public schools and public schools in Australia. In the latter relationship Australian and Asheville-area students are communicating on children's literature. To foster extension of this kind of activity, a position at the level of professor is being allocated half-time during the 1991–92 academic year, for work with students in the field on computer use.

The University of North Carolina at Chapel Hill and the Public Schools of Chapel Hill–Carrboro and Durham Cities and Durham and Orange Counties

Partnership is the key operating concept in this program of The University of North Carolina at Chapel Hill (UNC–CH) to prepare middle school teachers. In the planning, the execution, and the monitoring of courses and clinical experiences, school and university people work cooperatively. To fuse the partnership between the schools and the university, a master teacher is selected each year to join the university faculty as a clinical instructor, bringing to courses the perspective of both the world of practice and the world of academe. Another deliberate strategy is the partnership that develops among students by virtue of their traveling through the program as a cohort.

Weaving together theory and practice in a sequence of courses on campus and clinical experiences in schools, the program offers students almost immediate opportunity to test what they have studied in the abstract. Throughout the clinical component the prospective teacher is assisted by public school teachers and professors in analyzing, evaluating, and interpreting teaching practice. To ensure linkage of the hypothetical and the simulated to the real world, the clinical instructor co-teaches all of the courses that middle school preservice teachers take, and oversees the connection between course content and clinical experiences. A university professor is assigned full-time to manage the program. She also advises students in the program and supervises their student teaching.

PLANNING

Collaboration between the schools and the university began with planning sessions in summer 1988. School districts paid half the cost of these sessions. During the first year a steering committee of associate superintendents and university educators met to lay out the general plan. This committee was and continues to be concerned with matters like the relationship between the schools and the university, evaluation of the program, and future projects. The first year the committee met every week to fine-tune the academic and clinical aspects of training; the following year it met monthly; now it meets twice a quarter.

The details of the courses and the clinical experiences were planned, tested, and refined cooperatively by a committee called the Teacher Advisory Group, which consisted of one teacher from each of the four school districts involved, and

several professors from UNC–CH. This group started from scratch. The first clinical instructor, Chip Moore, put it this way:

> I don't know of any program that began, as we did, by throwing everything out. We started with a clean slate, talking about things that young interns need to know and do. From that we created objectives and then looked at all those things and how we could pull them together to create courses and related clinical experience.

School districts paid for substitutes to release teachers on the advisory group. The university contingent included faculty from the arts and sciences as well as from education, enabling the program to bring subject matter and pedagogy together from the outset. Planning also encompassed the courses in subject matter that middle school teachers must take to prepare for what they will teach, as well as prerequisites in general education before entering middle grades teacher education.

PRE-STUDENT-TEACHING CURRICULUM

Introduction to the Teaching Profession

To precede student teaching, planners fashioned four courses that a cohort of students would take together. In the first course, Introduction to the Teaching Profession, not only do prospective teachers read about schools, teaching, students, current trends and issues, and the characteristics of the profession, but they also observe and discuss middle school instruction, a school open house, faculty and school board meetings, extracurricular activities, and teacher organization conferences. Further, they shadow both a teacher and a middle school student for half a day. To demonstrate their understandings and to reflect on their observations, students write response papers describing what they observed and relating what they saw and heard to readings and class discussion.

Planning for Teaching

To follow the first course, a course on planning and instructional strategies, called Planning for Teaching, was built primarily around the use of case studies. The course content includes such topics as the nature of student characteristics, long-range and integrated curriculum planning, various approaches to teaching, accommodation of individual differences, and evaluation of student progress. Both real and simulated teaching situations are examined and analyzed. Teachers-to-be spend time in schools observing, and they draw on actual events from the firing line as substance for class discussion.

Teaching Skills Laboratory

A third course was created to hone teaching skills. It uses a microteaching laboratory. Students practice various types of instruction—for example, lecture, discussion, and inquiry. They learn to perform core teaching skills by viewing videotapes of themselves, observing their peers teaching "lessons," teaching short lessons to middle school students, and reflecting on different

teaching strategies. In conferences with faculty members they critique their videotapes. After discussion and evaluation they replan and reteach the same lesson. The North Carolina Teacher Performance Appraisal Instrument (TPAI) and the Carolina Teaching Skills Observation Instrument (created for the program) as well as other evaluation schemes are employed in analysis and evaluation. In addition to acquiring skill in observing, analyzing, and critiquing teaching performance, students examine the research that supports the TPAI and study the knowledge base underlying the art of teaching.

Teaching in the Middle Grades

The philosophy and the mission of the middle school, as well as its curriculum and organizational patterns, are the focus of the fourth course constructed for the program, Teaching in the Middle Grades. It includes special attention to the teaching of reading and writing in content areas and to methods of teaching the subjects in which the student plans to specialize. In the latter phase of the course, each student completes two modules in his or her subject of specialization—mathematics, science, language arts, or social studies. Each module deals with the scope of the subject it encompasses, the uniqueness of teaching the subject, specific strategies for teaching the content, various philosophies of teaching it, sources of teaching and learning materials, the relevant state curriculum, ways of integrating the subject with others, ways of incorporating multicultural perspectives, the use of technology, and topics distinctive to the subject.

In a parallel, related activity, students observe for two hours a week in the classroom of the clinical teacher with whom they will student-teach in the next semester. They also observe other teachers in the school and take note of the approaches that various teachers use in planning, classroom management, relationships with parents, cooperative learning, grouping in the classroom, etc. Students then begin to design a unit of instruction for their content area, as well as working with other students to create an interdisciplinary unit. The unit plans are developed with the clinical teacher so that they can be used by the intern during the spring quarter.

STUDENT TEACHING

Student teaching, defined in this program as an internship, takes place in seven middle schools in Chapel Hill–Carrboro City, Durham City, Durham County, and Orange County, under the supervision of specially prepared clinical teachers and university supervisors. Two or more interns are typically assigned to a school to continue the emphasis on reflection that has been promoted in courses and prior clinical activities. The phenomenon of cohort learning—that is, a group moving together through a sequence of courses—stimulates thought, fosters reflection, and reiterates the value of professionals learning from

one another, even though in student teaching the groups are smaller than they were in previous activities. The cohort arrangement helps faculty know exactly what students have had before. Gail Jones, assistant professor of middle grades teacher education and program director, says,

> The cohort system assures that we don't repeat ourselves uselessly. It enables us to sequence the instruction, making it more time-efficient for the student, and allows us to build on prior understandings. This structure gives the student a mutually supportive peer group that nurtures professional growth. There is a lot of interaction among students.

"The professor managing the program has kept track of graduates who have taken jobs in the Triangle area. She reports that all have been eminently successful, except for their facing some of the usual problems that beginners encounter with classroom management."

Student teaching begins with the clinical teacher and the intern teaching classes as a team. The interns already know the students because they have observed the beginning of school in late August and have spent two hours a week in the classroom during the fall semester. Gradually they begin to take increasing responsibility for planning and teaching until they have full charge of the class. During the entire internship the clinical teacher serves as a support person, conducting informal evaluations; coaching; and conferring on planning, execution, and analysis of teaching. Clinical teachers also familiarize interns with school routines and record keeping. Simultaneously the university supervisor observes interns every week or so and confers with both the intern and the clinical teacher. Supervision is viewed as a three-way process involving the student, the clinical teacher, and the university supervisor equally.

During their internship the interns must observe at least 10 other teachers in the school to which they are assigned. Some make visits to other schools. The interns also get involved in parent conferences, parent-teacher meetings, and faculty meetings. In addition, they assume the extra responsibilities that teachers draw, such as lunchroom supervision and bus duty.

Concurrently with the internship, students participate in a seminar on teaching in the middle school, which was also designed by the Teacher Advisory Group. The seminar provides a discussion time away from school in which interns can reflect on various problems and challenges, be they classroom management, unit planning, multicultural or gender issues, stress management, cooperative learning, or worries about the future (e.g., finding a job, becoming certified, or participating in the North Carolina beginning teacher program).

UNIVERSITY SUPERVISORS

The university supervisors are professors and graduate students with expertise in the content area of the interns. Each supervises up to eight interns and plays a major role in assisting in their

development. The university program director functions as a trouble-shooter for any intern who might have a special problem. She also serves as an advisor to most of the students throughout their time in the program and knows each intern well. Through such close contact she keeps track of the students' understanding of the relationship of content and pedagogical courses to clinical teaching experiences.

CLINICAL TEACHERS

Clinical teachers are carefully selected and specially prepared for their jobs, and they assume the role by choice. They are required to have experience supervising student teachers and beginning teachers. They must have completed the Effective Teacher Training program, training in the use of the Teacher Performance Appraisal Instrument (TPAI), the state's mentor training, and a special orientation to the middle grades teacher education program. They must be recommended by a peer teacher, their department head, and their principal. As teacher educators, they must know how to mesh research with the complex of knowledge, skills, and values that the intern brings to student teaching. They must be able to establish a climate and a relationship with the intern in which the intern feels free to seek the limits of his or her potential. They must be able to observe and gather data on the intern's teaching, analyze the data, and then confer with the intern to assist him or her in becoming an effective teacher. They must also be able to become a fully participating member of the university faculty, taking part in relevant program and curriculum decisions.

RESULTS

So far, most of the available evaluation data on the program are informal. However, a formal study is under way to determine the success of graduates in teaching. The professor managing the program has kept track of graduates who have taken jobs in the Triangle area. She reports that all have been eminently successful, except for their facing some of the usual problems that beginners encounter with classroom management. One graduate has been sufficiently impressive to be offered a department chair, after only one year.

Dissemination of the program has included presentations at various state meetings and at national conferences on middle grades teacher education. Strong components of the program, according to faculty, clinical instructors, and clinical teachers, include the sequencing of courses, the way in which courses have been designed, and the interdisciplinary structure. Having the faculty work together to design the program is viewed as an important process component. Faculty find that sitting in on colleagues' courses and team-teaching are effective in ensuring continuity, and they have learned to value (and use) multiple perspectives.

MODEL SUMMER SCHOOL PROGRAM

The University of North Carolina at Chapel Hill and the Public Schools of Chapel Hill–Carrboro and Durham Cities and Durham and Orange Counties

The summer school clinical teaching program at The University of North Carolina at Chapel Hill (UNC–CH) is designed to serve students who already have a bachelor's degree, enabling them to take advantage of summer sessions to complete certification requirements for secondary school teaching. To be admitted, candidates must have graduated from an accredited college or university. Students have been recruited in English, mathematics, social science, and science.

Initially, students completed most of their professional studies in two summer sessions, studying pedagogy in the first session and doing an internship in the second. The following fall they registered as part-time students to complete the requirements of their internship. The courses in the professional studies sequence were similar to those developed for UNC–CH's Teacher Education Through Partnership program, except that content was adapted to the characteristics of secondary schools and adolescent learners. Fifteen people enrolled in the first summer school clinical teaching program in 1989.

REVISION

Assessment of the first year led to a revision of the program. Both the clinical teachers (cooperating teachers) and the interns had found the summer clinical experience and the part-time internship in the fall to be insufficient. The majority of instruction had employed the lecture method and seat work (in workbooks). The summer school days had been short (8:30 a.m.–1:00 p.m.), and overall, the interns' time in school classrooms had been only 20–25 days. Both clinical teachers and interns indicated that longer periods of teaching were needed. Also, because of budget problems school district personnel had been forced to select the summer clinical teachers at the end of the school year. This had given program personnel little input into selection and minimal time to plan the roles that the interns might play with the clinical teachers.

As a result, three changes were made: (1) The fall internship became full-time and was connected to the summer internship preceding it. (2) The course, Introduction to the Teaching Profession, was added to the professional studies sequence to develop better understandings of the cultural, legal, and social influences on the public school. (3) The university became a partner in selecting clinical teachers, and the model clinical

teaching program began to provide workshops for the teachers selected.

The summer school clinical teaching program was not offered in 1990 because of a freeze on the monies for the program. In 1991 seven students participated in the revised program, which was staffed by seven clinical teachers and three university faculty. The students completed Planning for Teaching and the Teaching Skills Laboratory during the first summer session, and they interned at a middle school during the second one. The course, Introduction to the Teaching Profession, was integrated with the internship, and it too was taught at the school. Interns participated in a variety of instructional activities, such as planning lessons, designing instructional materials, teaching lessons, and evaluating students' progress. There was time for discussion with clinical teachers about rationales for using various strategies and materials. The interns also had opportunities to work with exceptional students as well as regular students. (Summer school is for students who have fallen behind or who need remedial work. Consequently, instructional groups are smaller, and the internship experience is different from that in the school year.)

The program will continue in 1992 with the revised curriculum. However, it will focus on midcareer people who have a record of success in such fields as business, engineering, government, and the military, and who have completed a bachelor's degree in a foreign language (French, German, or Spanish), mathematics, a science, or a related area like engineering. Also, the Chatham County schools will become a fifth cooperating system.

PREPARATION OF PUBLIC SCHOOL MASTER TEACHERS TO BE UNIVERSITY SUPERVISORS OF STUDENT TEACHERS

The University of North Carolina at Charlotte and the Public Schools of Albemarle, Kings Mountain, Monroe, Mooresville, and Shelby Cities, Anson, Cleveland, Gaston, Lincoln, Rutherford, Stanly, and Union Counties, Iredell-Statesville, and Rowan-Salisbury

The intent of this model clinical teaching program, called Project Supervisor, is to give teachers and administrators in school districts in the region around Charlotte-Mecklenburg an opportunity to be partners with The University of North Carolina at Charlotte (UNC–C) in preparing teachers, and to enable public school educators in that region to influence the teacher education program of the university.

ORIGINS

Before Project Supervisor was conceived, one of the dilemmas for UNC–C had been how to establish a relationship with school systems outside its base in the Charlotte-Mecklenburg area, given that the Charlotte-Mecklenburg school district was large enough to accommodate all of UNC–C's student teachers. The thinking of university personnel who initiated this program was that placing student teachers in outlying schools would have several advantages for both the university and the school districts. It would put the university in more intimate contact with rural schools, give teachers in the region's schools a better idea of what was going on at the university, and provide stimulation and challenge for the teachers and the administrators involved. It would also bring current thinking in education into the schools through the student teachers and the university personnel who would work in the schools. Further, it would serve indirectly as a form of teacher recruitment; high school students seeing young people preparing to teach might choose teaching as a result.

The chief barrier to collaboration with outlying schools in student teaching had been the absence of a travel budget for university supervisors. Funds for travel to supervise student teachers were nil because the College of Education and Allied Professions had been a latecomer to teacher preparation. It had evolved from a department of education and had historically been treated as a department. Thus it had no budget for a student teaching or certification component.

"In order to get our students out into the field [beyond Charlotte-Mecklenburg], the kind of help Project Supervisor has provided was needed," says Harold W. (Bill) Heller, dean of the college. "The college could not and cannot afford to have college supervisors go out to rural towns and counties such as Shelby, Cleveland, and Rutherford and visit student teachers enough times to ensure a quality clinical experience." The

circumstance limited access to some good schools and some outstanding teachers. It deprived teachers who wanted to work with student teachers of that opportunity.

TRAINING AND USE OF SUPERVISORS

So a scheme was devised to train master teachers in the outlying areas to join in the teacher education process as supervisors of student teachers. The master teachers were selected by their peers. The first year, in a week-long credit-bearing institute, 44 master teachers received training in observation and conferencing skills and evaluation techniques. They were also made aware of college expectations for student teaching, given an orientation to the campus preparation program, and trained in mentoring. They were then designated *adjunct clinical supervisors*, a term later changed to *project supervisors*.

On their first two supervisory visits, they were accompanied by a university mentor, an experienced college supervisor of student teachers who advised and assisted them. Also, in the course of their first year, they participated in four follow-up seminars to enhance their supervisory skills and to promote communication with the university campus.

The first group of 44 was expanded in the second year when another cohort was trained. The present total is 74.

> ***"In the first-year evaluation, all of the supervisors rated the program favorably, and all of the student teachers rated their supervisor highly. The evaluation confirmed that the supervisors were making accurate, effective observations of student teachers (identifying strengths and weaknesses) and conferring effectively on improvement. . . . The second-year evaluation was equally reassuring."***

The supervisors supervise a maximum of one student teacher per semester. Of course, all of them are not assigned student teachers each semester; they serve as the need arises in the grade and the subject of their expertise. Their student teacher is not necessarily in the same school, although there were more same-school assignments in the second year than there were in the first.

The supervisors are provided with five half days away from their regular teaching assignment and a stipend for their student teaching work. Substitute teachers, paid from the project budget, cover their classes during those absences.

In a typical semester the supervisors visit their student teacher four times and have one half-day for reports and other paperwork. On visits they review plans and rationales for lessons. They also observe and evaluate the student teacher and meet with him or her in a follow-up conference. The latter may include the cooperating teacher. In any case the supervisor is in close touch with the cooperating teacher.

Over time a kind of portfolio develops from the record that the supervisor keeps. This may include a videotape of the student teacher in action.

Cooperating teachers have less training than supervisors, but for both, orientation is a continuous process. To promote greater awareness of teacher education—types of clinical experiences, supervisory practices, assignments and expectations, grading practices, university policies, etc.—there continue to be seminars and refresher programs on the university campus in Charlotte.

RESULTS

The project has been evaluated during and after each of its two years of existence by two highly skilled professors from other state universities. These outside evaluators, who made two visits during the first year and one during the second, assessed all aspects of the program, focusing on the effectiveness of the supervisors' performance. To gather data, they observed the supervisors performing observations and follow-up conferences with their student teacher and interviewed the supervisors on their conference procedures. They also asked the supervisors to complete a questionnaire on conferencing with student teachers. The student teachers too were observed and interviewed.

In the first-year evaluation, all of the supervisors rated the program favorably, and all of the student teachers rated their supervisor highly. The evaluation confirmed that the supervisors were making accurate, effective observations of student teachers (identifying strengths and weaknesses) and conferring effectively on improvement. For example, all of the student teachers reported that the suggestions they had received from their supervisor were valuable.

The second-year evaluation was equally reassuring. Supervisors' ratings of the program were higher than their ratings of it in the first year. All involved—the student teachers, the cooperating teachers, the adjunct supervisors, and the university supervisors—were positive about the project. The evaluators reported, "No one suggested major alterations or cancellations." A compilation of data from interviews, from written and oral comments, and from attendance at a general meeting contained accolades about the adequacy of the training, the quality of observation and supervision forms, the effectiveness of one-on-one and three-way conferences, the benefits of proximity between supervisors and student teachers, the quality of supervisors' observations and follow-up conferences, the availability of student teaching placements close to home, the level of commitment of all involved, and the effectiveness of having "real teachers" for practice and the university for theory.

The outside evaluators also identified participants' concerns, including the redundancy of continuous critiquing of lesson plans and the need for joint meetings of project and regular

student teachers. Student teachers and cooperating teachers were confused about reports—who should receive them, what was required, and when they were due. Supervisors expressed reservations about being away from their classes, and uncertainty about policies on attending seminars, policies on required forms, and the extent of their authority.

Recommendations for improvement have included making campus seminars more relevant, offering supervisors a guide to the use of the North Carolina Teacher Performance Appraisal Instrument (which is employed in evaluating student teachers), reconsidering the number of long-form lesson plans required, scheduling regular meetings of supervisors, and instituting same-school assignments for all supervisors and student teachers.

Initially, some College of Education faculty had difficulty accepting master teachers as supervisors of student teaching. The results of the outside evaluation have helped to persuade some of the doubters.

In the outside evaluators' opinion the Project Supervisor model has great promise for replication across the state in areas where a college is far from student teaching sites. The evaluators also conclude that master teachers can be trained as adjunct supervisors of student teaching without reducing quality.

SUMMER STUDENT TEACHING OF CHILDREN WITH HANDICAPS

The University of North Carolina at Charlotte and the Public Schools of Charlotte-Mecklenburg, Iredell-Statesville, and Cabarrus and Lincoln Counties

Project REACH (Regular Educators Accommodating Children with Handicaps) was designed for postbaccalaureate, lateral-entry, and selected regular students who want a specialized student teaching experience in the summer. Sponsored by The University of North Carolina at Charlotte (UNC–C) and three school districts, the program offers students a clinical assignment with teachers who have demonstrated excellence in teaching children with mild disabilities and special needs in regular classrooms.

The student teaching component of Project REACH takes place in a four- to six-week summer session, but there is also a pre–student-teaching component, so application to participate must be made in February. Students accepted for the program are matched with a cooperating teacher early in March. Clinical experiences in the classroom and other preparation for student teaching begin that same month. The work is done in a regular classroom taught by the cooperating teacher with whom they will student-teach in the summer.

The three participating school systems provide nine sites for summer student teaching. Fifteen clinical teachers serve as cooperating teachers. The summer session classes in which student teaching takes place are conducted largely for remedial and habilitation purposes. The students are often low achievers or at-risk children—the kind whom teachers have trouble with during the regular year. They are largely children with special needs, in the generic sense if not in the legal sense. The clinical experience provides a way for prospective teachers to have contact with exceptional children of many types.

The student teachers are selected carefully; expectations are very high. Many are nontraditional students, older and more mature. Quite a few have a college degree and are entering a second career; for example, among them are social workers and teacher assistants. They are mostly people with work experience. Some are parents. For a considerable number, becoming a teacher is a step up the ladder of occupations.

PRE–STUDENT-TEACHING EXPERIENCES

Prospective student teachers begin 30 hours of observing in their cooperating teacher's regular classroom in the middle of March. For this and subsequent pre–student-teaching clinical

experiences, a set of activities is outlined that students must complete. The activities include preparing materials, participating in instruction and classroom management, evaluating learning, learning about the organization and the operation of the school, and exploring professional concerns (ethical behavior, inservice needs, etc.).

Student teachers begin more intense pre–student-teaching responsibilities in early May. The first of these involves their spending mornings in the classroom observing for one week. Afternoons during that week are spent in a 15-hour (1:00–4:00 p.m.) seminar on campus. This experience is followed by two weeks full-time in the classroom assisting the cooperating teacher. Finally, there is a one-day orientation for both student teachers and cooperating teachers, which takes place on the university campus and focuses on the summer's work.

A DIFFERENT STUDENT TEACHING EXPERIENCE

Student teaching in this program is different from the usual practicum. Having been paired well in advance of the experience, the student teacher and the cooperating teacher have been able to get acquainted. They have worked together in and conferred about innumerable teaching-learning situations during the spring semester. Among other things this has involved discussing and reviewing activities in the regular classroom of the cooperating teacher.

When student teaching begins, it begins immediately. The novice does not sit for days or weeks observing the master teacher, as in regular student teaching. "This is baptism by fire," says Melba Spooner, project director.

> It's similar to starting teaching—opening school, starting with a new group. The student teachers, of course, are more mature, more ready, and more aggressive. They step right in and suggest, "This is what I propose to do," which is quite different from the typical undergraduate, who waits to be told.

Student teachers receive more attention from the cooperating teacher and more supervision from the administration. It is not unusual to see a principal in the classroom working with a student teacher. Also, the student teacher has more status; for example, he or she is listed as a regular staff member for the summer.

Classes are smaller than in regular school, usually no larger than 15, but the assignment is tough—dealing with an entire class of children who have some type of special need. Regular school might have only one or two of these students in a classroom. As a consequence, and because the time is short, the

student teacher and the cooperating teacher work as a team. They both teach most of the time, working with individuals and small groups.

Before summer school each child's regular-year teacher prepares (with parents) a report on him or her. This information is sent to the summer session teachers, who also do an on-the-spot assessment of proficiency in math and reading. These data serve as background on which the student teacher must reflect in preparing an instructional plan for each week. The procedure comes close to that followed in designing and implementing the Individualized Education Plan (IEP) that is required for special education students. The student teachers must manage the individual education of each child. In the process they participate in developing a progress report on the children's study habits, academic achievement, social learnings, etc. Student teachers also take part in conferences with parents at the end of the summer session. For the student teacher all of these experiences are clinical in that they are scrutinized, analyzed, and assessed to help the individual learn and refine teaching skills.

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To carry forward the program, the school systems and the cooperating teachers have had to give a lot. The cooperating teachers, for example, are not paid for the work that they do with the student teachers during the spring semester. However, they do receive a small bonus for guiding the student teachers during summer session.

RESULTS

Evidence on the effectiveness of the program has been gathered from student and faculty reaction and through an appraisal by an external evaluator.

Following are selected comments from students:

It was like an educational "boot camp," but I learned more about teaching than in two years of education courses.

[It was] challenging and intense. I liked being there from the beginning to the end (setting up the classroom and taking a part), as opposed to just stepping into an already made classroom and procedures. I loved being in total control from day one to the end.

Pupils felt good about themselves, as well as making academic progress.

Some remarks from faculty:

Having an extra person in the classroom makes a difference. It makes possible giving each pupil much more individual attention.—A cooperating teacher

> The 13 students who have gone through the program have been followed into employment, and they are doing an excellent job.—Melba Spooner

> We've made some adjustments: We get them out earlier to do some work with teachers in the classroom, so they have more exposure to teaching than in the regular program, because once summer school begins, these people move right into action and begin doing things. It's intensive.—Bill Heller

> The model has provided a way for regular students who can qualify, to get more into a four-year time span.—Melba Spooner

The external evaluator had these findings to report, based on data from 19 participants in summer 1989:

> Prior to the Project REACH experience, 40 percent of the student teachers were willing to have special needs students in their classroom; after participating, more than 85 percent indicated a willingness to have exceptional children in their classes.

> Attitudes toward increasing selected teaching behaviors, providing instruction in varied learning groups, and participating in building-based support teams improved. . . .

> Participants indicated that the time available in the classroom and the small class size provided them with adequate experience to function in a regular classroom situation.

> Using the same evaluation instrument that is employed in a regular student teaching experience, both student teachers and cooperating teachers evaluated the quality of supervision by the University faculty as highly effective.

The University of North Carolina at Wilmington and the Public Schools of Brunswick and New Hanover Counties

The highlight of the pilot clinical teaching project at The University of North Carolina at Wilmington (UNC–W) is its enlargement of the scope of student teaching to include curriculum and instructional improvement. This sets a new purpose for student teaching appropriate to both the university and the schools. Student teachers, cooperating teachers, and university supervisors (called interns, clinical teachers, and clinical professors, respectively) form teams to develop common understandings about teaching and learning. Roles and relationships are redefined, and new structures are created to support change.

The project addresses several problems in traditional student teaching programs: (1) hierarchical relationships, (2) lack of cohesiveness within or across student teaching sites, (3) discrepancies between the ideal and the real world of teaching, (4) difficulty applying what has been learned, (5) difficulty developing a professional attitude, and (6) patterns of communication based on authority rather than collegiality.

Voluntary participation, agreement on goals, collegial communication, and problem solving by a site-based team are basic to the project. It involves a yearlong commitment for the clinical teachers and the clinical professors, early identification of participants, reform of curriculum and instruction, collaboration, and shared control (see Figure 1).

SELECTION OF SCHOOLS

To get the program under way, university personnel selected three elementary schools in which administrators and teachers wanted to change their understanding of teaching, engage in site-based management, and work with the university in reforming curriculum and instruction and devising new roles for teachers. These schools were already cooperating with the university in providing placements for student teaching. Also, they served disadvantaged, at-risk students. The student population was more than 30 percent minority.

The faculties were asked to identify curriculum changes that they wanted to make. One faculty wanted to introduce a literature-based curriculum, another a thematic curriculum, and the third an integrated curriculum. These changes were consistent with models taught in the university's teacher education program. They were also areas in which university faculty had interest and expertise. The fit was good.

MATCHING OF INTERNS WITH CLINICAL TEACHERS

Prospective fall and spring interns then visited the three schools and observed and interviewed teachers who had applied to be part of the project. The interns were asked to indicate their preferences among the schools and the clinical teachers. The clinical teachers too made known their preferences among the interns. In most cases the choices were mutually agreeable, and the principal and the university supervisor concurred in them. During the 1990–91 school year, 28 of 150 students in student teaching took part in the pilot program.

IMPLEMENTATION

The intern–clinical teacher–clinical professor teams in each school operated within the curriculum and instructional pattern that their school had selected and developed a global, yearlong plan for their class. They worked together before and during student teaching on plans and procedures for curriculum and instruction, developing a curriculum, behavior management plans, and organizational procedures for the year.

Students scheduled to be interns in either the fall or the spring semester planned with their clinical teacher in a two-week summer workshop. Principals and university faculty worked with the teams.

The fall interns began their semester with their clinical teacher on the regular preschool workdays. To ensure that the spring interns also experienced the beginning of school, they were present for the fall opening. Further, during the fall, in connection with methods courses, they observed in the classroom in which they would do their student teaching, and they participated in minor teaching and helping roles. This orientation also involved getting acquainted with the children and planning for the transition from the fall intern to the spring intern. When feasible, the fall interns came back in the spring to be a part of completing the semester.

From the start the interns were introduced and treated as teachers. They were expected to assume every responsibility of the regular teacher, but under guidance. Even before they got into classrooms, they worked on curriculum, devised ways to help students learn, and made decisions. The interns, the clinical teachers, and the clinical professors worked together most of the time. All thought of themselves as learners and facilitators of learning.

As the semester progressed, meetings were scheduled to discuss topics on which the interns wanted more information. A variety of instruments were created to collect data on the interns' attitudes, beliefs about education, views of teaching,

and concerns as teachers. There were also forms for reports, anecdotal records, logs, and evaluation.

Professors assembled a host of data on the interns' needs. Discipline always surfaced as a topic of concern. The interns wanted more information and assistance on how to handle students more effectively. At the right moment in discussion, the clinical professor might offer to observe in a situation that an intern found perplexing. The outcome of the observation and a follow-up conference often served to satisfy the intern.

The clinical professor was in a school at least once a week, usually observing, sometimes demonstrating, always conducting a follow-up conference, and always fostering reflection and seeking insights. The intern, the clinical teacher, and the clinical professor became a collegial team for decision making about curriculum and instructional matters in the classroom.

EVALUATION OF INTERNS

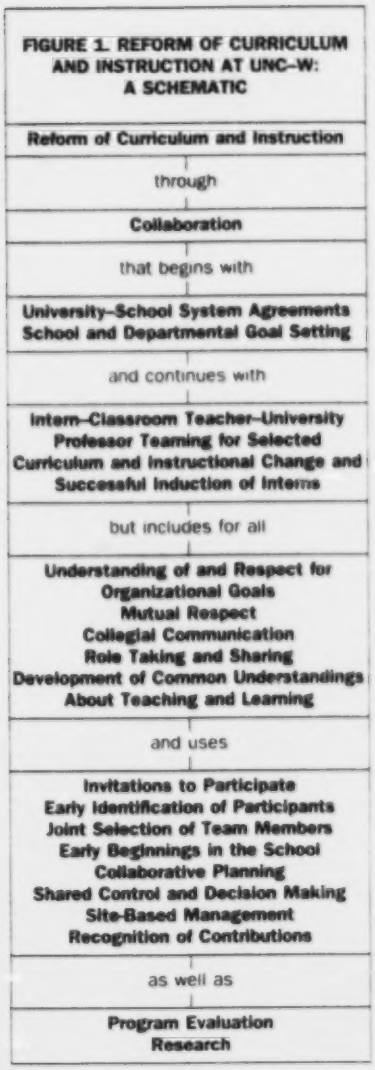
Grading for the student teaching semester became a critical issue for all project participants. At times the notion that interns were teachers became problematic. Accountability was fuzzy when intern and clinical teacher worked together because responsibility could not always be easily assigned to a single collaborator. The tack that was taken to resolve the problem was to document what was happening. With both partners functioning as learners, it became profitable for them to talk about observations and to begin to learn from shared experiences. What was working? Were they meeting the school's standards? What could they do differently? What should they do if they wanted students to . . . ? How did a clinical teacher function as a facilitator? Both intern and clinical teacher learned as alternatives were discussed and insights surfaced. Formative evaluation sessions typically started with introspective questions, essentially self-evaluation. They continued with each team member sharing perspectives. They concluded after consensus was reached on judgments about various aspects of teaching.

RESULTS

The approach of documenting events and examining and evaluating them in conference to ascertain what and how well teaching and learning were occurring, served an immediate purpose. It will also be part of research and analysis yet to come. In a collective sense many of these data must still be interpreted. They include case studies on each school, interviews with teachers, journals, data from several evaluative instruments, and anecdotal records.

Meanwhile some evidence is already available. A principal testified, "Pupils were learning and found joy in their success."

FIGURE 1. REFORM OF CURRICULUM AND INSTRUCTION AT UNC–W: A SCHEMATIC



A teacher said, "I could see children learning." Another remarked, "I'm understanding teaching better than ever before." A university professor expressed the opinion that there is "much more progress by prospective teachers in this program." A principal said, "Most of these students are ready to walk into a classroom and teach. I was ready to hire any number of them. They have much more understanding about curriculum development and instruction and are full of confidence."

One professor reflected, "Students so often complain that what we teach in university courses isn't possible in real schools. Now we're into schools where what we teach at the university is implemented. There's a close match philosophically, and there has been a readiness to make some real changes." Teachers, in fact, reported that they used interns as a resource. One teacher said, "I tell them, 'You studied this recently—what do you think?'"

Several school and college staff indicate that curriculum reform now has been initiated. After major innovations have taken place, subsequent change becomes incremental. Hathia Hayes admits, "We've gotten to use some organizing principles and achieved some massive changes. After that it's refinements and fine-tuning. Of course, we still need to see how institutionalized the changes have become."

Researcher Andrew Hayes, commenting on the project's purpose of improving curriculum and instruction, says:

> There does seem to be both the impetus and the support to continue the project. Teachers appear to feel that they have done something that works. They have volunteered to come back during the summer to plan a retreat without remuneration. Parents appear to be very supportive. Teachers say that there has been a tremendous increase in PTA participation. One school reported increases of one-third to more than double in attendance at PTA meetings. Parents have commented on how much they like what is going on.

The question remains for the program director and others: Is it possible for this curriculum and instructional reform project to be implemented with all elementary school student teachers, as designed? Should it become the model for all levels of student teaching? Is this a model for selected schools and students? What university and school changes are needed to support and sustain such change efforts?

Perhaps a final observation by the project evaluator expresses a perspective that will help guide decisions about project directions:

> A collaborative project involves multiple parties working toward a common goal. In this project school goals have been recognized, and the school and university have worked together on school goals. Also university goals have been recognized, and the schools have worked with the university to accomplish university goals. But collaboration has been largely with individual teachers, not the school system. It is important, even essential, that we work with the system in both directions. Collaboration should be organizational, and resources should be allocated for such collaboration. Finally, such collaboration should be institutionalized.

A MEDICAL EDUCATION MODEL FOR TEACHER EDUCATION

Wake Forest University
and the Public Schools of Winston-Salem/Forsyth County

The adaptation of several concepts from medical education to the preparation of high school teachers of English, mathematics, science, and social studies accounts for the title of the pilot clinical teaching program at Wake Forest University. The program, a 15-month commitment that starts in June, is billed as a new way to recruit bright people into teaching. Using medicine's concept of offering *professional training at the graduate level*, the program attracts graduates of colleges and universities across the country to an academic and clinical course of study that results in a master's degree and a teaching certificate.

Adaptation of the *teaching hospital* concept is played out by a faculty strong in both subject and pedagogy, who collaborate with the local school system, where carefully selected master teachers create a laboratory for learning to teach. Participants in the program, called fellows, observe master practitioners at work, have an opportunity for explanation and analysis of practice, and are given a chance to test their abilities and skills under the watchful eye of experts.

The *rotation system* in medical education is employed in exposing fellows to university and school personnel with different convictions about teaching and a healthy spirit of skepticism. This is not mere rhetoric. The fellows have assignments in schools, where they see and work with teachers who are dissimilar in approach and style. The cooperating master teachers, who are paid a stipend, are considered adjunct clinical faculty by the university. They were selected with the purpose of assembling people of varied persuasions. "They have different opinions about teaching," says program director Joseph Milner, "but they are willing to work with us and willing to talk among themselves. . . . We feel that challenge and controversy are important."

SELECTION OF PARTICIPANTS

The fellows are granted full scholarships worth $10,800, plus stipends of $3,000 for the 15 months. Initially, slots for 16 fellows were budgeted annually, 4 in each subject. That number has since been increased to 20, with the additional 4 earmarked for a minority person in each discipline, who receives a stipend of $8,000. Enrollees have represented a range of ages.

Faculty advisors in each subject select the people in their area. The fellows are selected on the basis of Graduate Record

Examination scores, undergraduate grade-point average, and a videotaped interview in which candidates respond to a diverse set of questions. The videotaped interviews in particular have enabled faculty to view how well applicants understand their discipline, how deep their sense of pedagogy is, what they think their teaching might become, what their values are, and how they feel about and evaluate various issues. Milner says, "If you ask a candidate, 'If you were given $100,000 a year for the rest of your life, with the stipulation that you could not work and you could not invest it, would you take the money?,' you get considerable insight into how a person thinks.

"If we don't get the people we think meet our standards, we just don't fill spots," adds Milner. Finding four qualified candidates in each field has not always been possible, particularly in mathematics. As a consequence, additional people have at times been admitted in English or social studies.

FEATURES

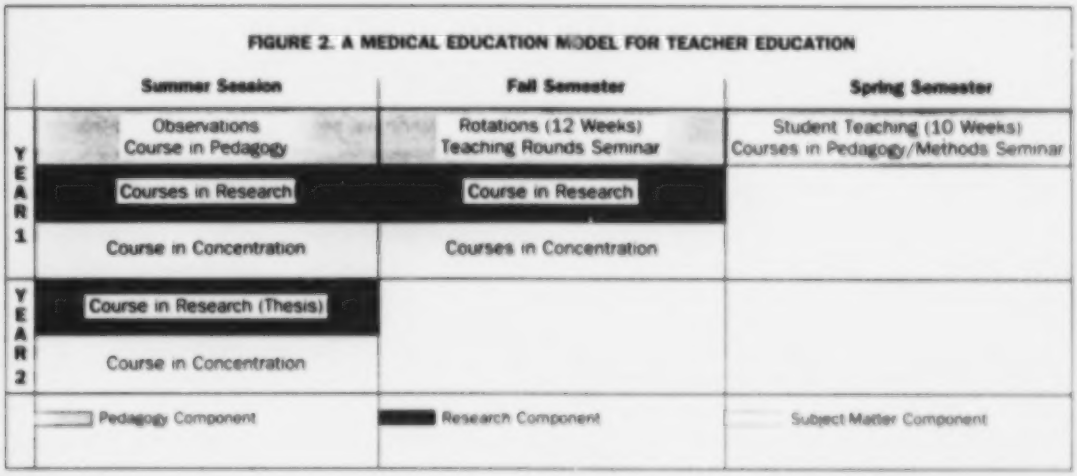
The yearly group of 15–20 is small, and that makes it possible for the faculty to get to know each fellow well. All students have advisors in their major subject who are heavily involved in both the academic and the pedagogical phases of study. The advisors teach some courses in their academic discipline plus some courses on teaching, and they supervise the fellows specializing in their subject as the fellows execute clinical assignments in the Winston-Salem/Forsyth County schools.

Throughout the 15 months there is emphasis on both academic and pedagogical study (see Figure 2). In the beginning, campus course work is predominant, but little time is wasted getting fellows into schools to observe. During their first summer in the program and into the fall, the fellows keep a log of their observations and trips to schools. This log is linked to a learning log in academic courses. In their observations the fellows are expected to think through different schemes for viewing the activity in a classroom. At first they are given 10 things to look for. Then they conduct an ethnographic study of some aspect of classroom life. Finally they develop their own scheme for observation.

ROTATIONS

The rotations, which begin in the fall semester and run for 12 weeks, involve each fellow in a succession of four three-week assignments observing four master teachers who are very competent professionals but quite dissimilar in approach and style. For example, one may be traditional and formal, another inquiry and discovery oriented, a third nondirective and supportive, and a fourth innovative and creative. The rotation calls for each fellow to observe each master teacher 12 times. The fellows' observations are analyzed and discussed in an accompanying

FIGURE 2. A MEDICAL EDUCATION MODEL FOR TEACHER EDUCATION



seminar attended by the master teachers, the faculty advisors, and outside consultants. The latter are experts and national leaders in the four fields of the program, and they serve as models for the fellows.

The rotations stimulate the fellows to think about different ways to teach. They serve to expose the fellows to various models of teaching, rather than indoctrinate them into a single one. The fellows can then be selective and eclectic about the styles of teaching that accommodate their personality, philosophy, values, and beliefs.

While they are involved in rotations and the related seminar, the fellows carry three academic courses. In addition, they take a research seminar to prepare for a required thesis.

OTHER CLINICAL EXPERIENCES

The fellows also use microteaching for clinical purposes. Microteaching is a simulated situation in which the individual tries teaching, with high school students or peers role-playing students. Immediately following a microteaching episode, there is discussion of what happened and what might have been done differently. Often microteaching is videotaped for replay and analysis with students and faculty.

STUDENT TEACHING

Student teaching occurs in the spring. The fellows begin by team-teaching with their cooperating master teachers, who play an important part in this clinical assignment. Induction is gradual. The fellows do only a little actual teaching at first, but fairly soon they take over. The cooperating master teachers have been carefully selected for their skill and sensitivity to novices. They observe and confer frequently with their student teacher.

During student teaching the emphasis is exclusively on pedagogy; fellows do not take courses in their major. Milner's conviction is, "When students are out there student teaching in the spring, you don't have them involved in academic work because it gets schizophrenic—a competition between two masters." Student teaching is accompanied by a seminar, held every week with a university professor. In it the fellows examine, analyze, and evaluate what they are doing in the classroom.

The university advisors observe the fellows weekly and make notes that they discuss with the student teachers in conferences after each observation. The advisors also talk with the cooperating teachers if they are available.

At the conclusion of student teaching, there is a proseminar in which fellows and faculty in all four disciplines convene for an evaluation of the student-teaching clinical experience.

Milner reports that student teaching is going well. However, he acknowledges that the university "needs to work more closely with cooperating teachers, particularly to be clear on common goals and to develop further our collegial relationship."

PARALLEL ACTIVITIES

A goal in clinical teaching is developing a sense of professionalism and providing an induction into a professional culture. Induction, though, goes beyond recruiting bright people and providing them with opportunities to study, see, and try teaching. It includes a concern for keeping them in the profession. To foster initiation into teaching, Milner took all of the English fellows to the National Council of Teachers of English conference in Atlanta this year. "They really were drawn into activities with professionals in their field," Milner reports. "Some became involved in the Black caucus; others shopped for sessions that fit their special interest." The fellows also attend state conferences of their subject-matter associations and are encouraged to attend other professional meetings.

RESULTS

Formal evaluation of the program has involved an outside evaluator surveying and interviewing each fellow on his or her response to the program and reporting the findings to university faculty in the program. This evaluation provides one source of information for considering program changes and refinements.

Several different indicators of success are evident. There is feedback from the field that graduates are effective teachers. Principals, for example, report that graduates are intellectually and pedagogically strong. Juniors and seniors in the regular undergraduate program now do a kind of rotation as a result of

the experiment. The Department of Romance Languages is considering offering the program in some of the foreign languages. This suggests that the program is attractive to other divisions in the university. Both school people and professors report the beginnings of conversations that illustrate openness as well as a sense of professionalism and pride. School and university faculty speak of treating each other more as colleagues. The National Council for Accreditation of Teacher Education (NCATE), in a recent review of the university's teacher education programs, cited the Medical Education Model for Teacher Education as strong.

A PARTNERSHIP OF EQUALS: UNIVERSITY PROFESSORS AND PUBLIC SCHOOL TEACHERS

Western Carolina University
and the Public Schools of Asheville and Hendersonville Cities, Tryon/Polk County, and Buncombe, Cherokee, Clay, Graham, Haywood, Henderson, Jackson, Macon, Madison, McDowell, Mitchell, Rutherford, Swain, Transylvania, and Yancey Counties

Western Carolina University (WCU) established its partnership with the public school systems in North Carolina Education District 8 to provide clinical experiences in connection with several undergraduate courses and to introduce the practitioner's perspective into the college classroom. The intent is to provide a gradual induction into teaching that blends theory and practice from the very outset of the university's teacher education program.

CLINICAL ACTIVITY RELATED TO COURSE WORK

Students begin their clinical experiences in WCU's course on foundations of education and continue them in courses on child and adolescent development and educational psychology. Course content and clinical activity are coordinated so that theory and knowledge about teaching are related to the actual experiences students have in schools.

The program calls for the students in each of the three courses to spend two hours a week for a semester in local school systems. The assignments usually take the students into different schools and classrooms. In the foundations course the students spend their two hours primarily in directed observation. In the other courses they participate in minor teaching roles.

The teachers who guide and supervise students in clinical experiences related to course work receive instruction and orientation for their task. They are identified through requests for practitioners who would be interested in having a prospective teacher in their classroom once a week for a semester. Those who say yes are asked for a copy of their schedule so that assignments can be made.

Principals, of course, are consulted. They endorse the solicitation and are often involved in selection.

Required Experiences

The university professor who makes the assignments for pre–student-teaching field experiences meets at the schools with the teachers before the beginning of a semester to give an overview of the program, discuss what the university expects, and share a list of activities that students might accomplish. The university has constructed and assembled a set of experiences related to each course that it wants teachers-in-training to have. Many of the experiences involve assisting the teacher in actual

teaching—diagnosing students' needs and planning, conducting a class or coaching a small group, evaluating students' work and assessing their progress, etc. Others entail noninstructional activities such as learning the setup of the school, gathering information on students and their families, and discovering the norms of the community.

One required experience is that each student be videotaped while teaching a 15-minute lesson to a small group of fellow students. These same peers immediately evaluate the lesson. The student who taught it then views the tape and evaluates himself or herself.

INVOLVEMENT OF TEACHERS IN METHODS COURSES

Methods courses follow the courses on foundations of education, child and adolescent development, and educational psychology. Professors in some methods courses voluntarily invite schoolteachers, called clinical faculty, to team-teach their classes. Most methods courses are specific to a subject or a level—for example, teaching mathematics or teaching in the elementary grades—so professors invite teachers in the appropriate subject or level.

The practice appears to be popular. Since 1988, when the model clinical teaching program began at WCU, clinical faculty have teamed with university instructors in 58 courses. Eleven different university faculty have used 33 teachers.

"Having teachers come into our classes gives us another connection with schools," says Marilyn Feldmann, director of the program.

> Primarily, though, the value is the mix of theory and practice. A professor can present research and summarize the literature, and that is enhanced by the teacher, who can illustrate with anecdotes from the classroom and present real and practical illustrations. And, of course, the interchange between the two and with students further enhances the quality of discourse.

Often the classrooms and the schools depicted by clinical faculty are the actual schools in which the students have spent time, and the students recognize the authenticity of the teacher's explanation and description of teaching practices.

Methods classes have frequently been scheduled in late afternoon or early evening to enable teachers working full-time to participate. More recently some school districts have been sufficiently impressed with the program to release teachers during school hours so that some methods courses can be taught during the day. The model clinical teaching program pays substitute teachers to cover the clinical faculty's classes. In the view of

project personnel, serving as clinical faculty deserves time and support as a contribution to teacher education, and it demonstrates commitment to the project theme, partnership.

STUDENT TEACHING

About 150 students complete student teaching each year. The requirements of the program are well delineated in a handbook that is provided to the cooperating teachers.

The cooperating teachers are selected by their principals. They participate in an orientation session conducted every semester in their county by the university's director of field experiences, who makes the student teaching assignments. He reviews the purposes of the experience and tells the cooperating teachers about the kinds of activities that the university expects the student teachers to perform, the supervision that the university will provide, and the seminar that the students will take on campus to accompany their student teaching.

The induction of the student teachers into teaching is gradual. As in most programs, they assume responsibilities when their cooperating teachers judge that they are ready. In addition to conferring almost daily with their cooperating teachers, the student teachers are visited and observed by a university supervisor at least seven times during the semester. Secondary school student teachers are also supervised three times during the semester by subject-matter specialists. Until fall 1990 the student teachers at both levels were observed by the university supervisor each week. However, travel funds became short, so the number of visits was reluctantly cut.

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A special requirement in student teaching is a videotaping of the student teacher's class. The camera is sometimes trained on the children. A university supervisor explains, "I want to see the kids. I can hear the teacher, but if I can see the reaction of the students, I can better tell what is happening." This differs from the usual approach of focusing on the teacher's performance. It shifts the emphasis to the learners' response.

At the start of the program, the student teachers were videotaped twice during the semester (with equipment funded by the model clinical teaching grant.) However, the cost of two sessions became exorbitant, so the frequency of videotaping was reduced to once. The videotapes are reviewed and critiqued in a joint session by the cooperating teacher, the student teacher, and the university supervisor.

The student teachers receive two other kinds of evaluation. One is the kind used by the school system to which they are assigned, usually the North Carolina Teacher Performance

Appraisal Instrument. The other is the university's Exit Criteria Instrument.

A seminar accompanies student teaching. Like the methods courses, it is sometimes team-taught by a clinical faculty member (a public school teacher) and a university instructor. This provides an opportunity, away from the school and the classroom, for student teachers to analyze, evaluate, and discuss their teaching experiences with a real teacher and their university professor. One benefit for student teachers is discovering that they are not alone in the problems they encounter.

RESULTS

The testimony from clinical faculty makes clear that schoolteacher involvement benefits both the university and the public school. In addition to their enlivening and improving college courses, clinical faculty themselves profit. One teacher said, "This was the greatest thing that ever happened to me. Getting involved with students at that level and having their input gave me a new zest for teaching." Another indicated that the experience had changed her whole approach to teaching, that she had taken what she had learned from students and applied it. Still another admitted that being a part of the methods course had caused her to change from using worksheets (fill-in-the-blanks material) to using hands-on activities and direct experience.

"This was the greatest thing that ever happened to me. Getting involved with students at that level and having their input gave me a new zest for teaching."

The impact of the program has gone beyond the clinical faculty, to other teachers in the schools. "A few of us took the idea of conceptual learning back to our school, and we have a different program now," one teacher reported. Another remarked that her school's introduction of the whole-language approach to reading and language arts was a direct result of the model clinical teaching program.

Reports on the equal partnership theme present a mixed picture. For example, a teacher experienced in relationships with the university felt that equality had been achieved in her case. A second teacher, new to the arrangement, did not feel very comfortable. A third teacher felt herself to be very much a part of the enterprise, making a significant contribution. If extent of participation in the team-teaching of courses is indicative of equality in partnership, evidence from an evaluation of four courses in spring 1991 confirms that there is both partnership and equality. Sixty-six of 90 students responding reported that clinical faculty had taught approximately one-half or more of the course; only 24 indicated that clinical faculty had taught less than 25 percent of the course.

Being a clinical faculty member has become so popular that the university now takes care not to favor a few teachers.

Informally the rule is to use teachers no more than twice in succession.

The collaboration of school and university in providing three semesters of in-school experience and having schoolteachers team with professors in college courses apparently makes a difference. One of the clinical faculty said, in comparing the old program with the new one,

> There is a tremendous difference in the quality of this program and the prior system. Previously students came to us in student teaching not knowing how to plan a lesson or how to present it. They had no idea of the whole setup of the school. They knew it only from the student's standpoint. Now they just move right in. It's something they are accustomed to doing. They pick up and go.

Evaluation data gathered through questionnaires also indicate strong support for various aspects of the program: the educational psychology course (evaluated by students each semester in 1988, 1989, 1990, and 1991); clinical faculty in four courses (evaluated by students in 1991); and student teaching (evaluated by student teachers each semester in 1988, 1989, 1990, and 1991).

A CASE STUDY APPROACH TO CLINICAL TEACHING

Winston-Salem State University
and the Public Schools of Winston-Salem/Forsyth County

The unique feature of the model clinical teaching program at Winston-Salem State University (WSSU) is the use of case studies to bring theory and practice more vividly into the consciousness of prospective teachers. Several other elements of the program are distinctive. Collaboration with public school teachers in Winston-Salem is fundamental. It started with the planning of the program. The program's methods course is taught by a team of professors and public school teachers. It highlights the teaching of thinking skills and critical thinking. The methods course and student teaching are taken in the same semester so that case material may be drawn from the immediate experience of student teachers. Finally, an interdisciplinary approach is employed in the methods course, which capitalizes on the training and the experience of members of the teaching team.

PLANNING

All of these aspects of the clinical teaching program were carefully explored and collaboratively planned by five university professors and five public school teachers. The literature on the case method of teaching in business, law, and medical schools was reviewed and discussed. Similarly, several approaches to the teaching of thinking skills were investigated and considered before the Cognitive Research Trust Program (CoRT) was selected for use. Also, a review of the literature on cooperative and collaborative learning strategies was examined, and the relative merits of each were compared, after which collaborative learning was chosen as the mode of operation.

The products of these several inquiries and deliberations are included in an unpublished manuscript entitled *The Case Study: An Alternative Approach to Clinical Teaching* (1990), written by 9 of the 10 planning team members. The manuscript also includes a comparison of traditional clinical teaching experiences with WSSU's model program. Further, it contains over 30 cases written by faculty and student teachers. The volume outlines the competencies that students are expected to acquire in their methods course and in student teaching. A sample journal entry of the type that student teachers are required to keep is presented. The manuscript describes a clustering technique for writing case studies, spells out a six-step method for case analysis, and offers illustrations of case study analyses by student teachers. It also reports two research studies (described later) evaluating the WSSU clinical teaching approach. Finally, for evaluation it includes the WSSU Department of Education's

form for student evaluation of the program, WSSU's Exit Criteria for Teacher Education Graduates, and the North Carolina Teacher Performance Appraisal Instrument (TPAI).

CLINICAL STAFF

Teachers who participate in the model clinical teaching program apply for a clinical staff position and are selected by the university. They must be master teachers and must have completed the Effective Teacher Training program and North Carolina's mentor training. A master's degree is also required. All have had training and experience in working with student teachers and have the ability to communicate with college students.

Clinical teachers become adjunct professors at WSSU. They receive a stipend for their work in the methods course.

Although clinical teachers do not typically supervise student teachers, several teach in the schools to which student teachers are assigned. When there is such proximity, they often help student teachers in one way or another.

METHODS COURSE

The methods course has been taught both on campus and in one of the public schools to which student teachers are assigned. It meets one day a week from 4:00 to 7:00 p.m. for 15 weeks, simultaneous with the student teaching semester. Initially, elementary school, middle school, and special education student teachers all participated. Recently, most middle school student teachers have not participated. The middle school teacher education faculty does not want to add another 3-hour interdisciplinary course because their students already have so many required courses.

The staff for the class always includes two university professors and several public school teachers (clinical staff/adjunct professors). They usually represent two or three specialty areas —for example, learning disabilities, early childhood education, and middle grades education. Overall, staff specialty areas include mathematics, science, special education/learning disabilities, and different levels of schooling. This variety enables faculty not only to follow an interdisciplinary approach, but also to form groups around methods and materials in specialty areas when that is appropriate.

Analysis and Writing of Case Studies

The centerpiece of the course is the case study. A case study usually revolves around a single student. The case studies that student teachers write develop from the journals that they keep. Journal entries are made each day during student teaching and then shared and discussed with peers and faculty in the methods course. Often students cluster in small groups

and develop a case from data noted in their journals. Also, students individually write a case.

Additionally, students analyze case studies written by faculty, several of which are included in *The Case Study: An Alternative Approach to Clinical Teaching*. "In total," says Samiha Youssef, one of the university professors on the teaching team, "students have numerous opportunities to share a broad range of teaching experiences as they, along with instructors, collaboratively analyze classroom episodes."

In all analysis of case studies, the focus is on identifying the major issue or problem and the concepts, ideas, practices, and beliefs that are significant in a case. Students then take a position on an issue, list the possible alternatives, and weigh the implications of each alternative identified. When they have decided on a course to follow, they project action steps that are consistent with the decisions they have made. Finally, they identify additional questions that need answers and the references that they need to consult.

Case study analysis is closely related to the actual problems that student teachers face, and it illustrates a method for thoughtful reflection and decision making that students can use with other problems they encounter in teaching. Jo Whitten May, director of the WSSU model clinical program, says, "The case study method helps students bridge the gap between theory and practice; it brings meaning to the field experience; it arouses the interest of the student teacher; and it makes the student an active rather than a passive participant in instruction." The emphasis on thinking skills supports the analysis process. Students are prompted directly to examine higher order learning. That examination, in addition to promoting depth of discussion on cases, can guide the development of classroom activities that help children learn to think.

Other Activities

The methods course involves much more than case study analysis. Throughout, there is help with planning lessons and improving teaching in the classroom. In addition to the focus on thinking skills, there is attention to cooperative learning, problem solving, behavior management, journal writing and documentation, and evaluation of student achievement. Students read widely and react to their reading in their journal. They must have a 10- to 15-minute lesson videotaped in their classroom, which the clinical teaching faculty evaluate using the TPAI. They view and discuss videotapes on subjects such as classroom management, individualization of instruction, teamteaching, and multicultural education. There is an assignment

with the faculty member in the student's specialization (e.g., elementary school, mathematics, or special education). The final examination is a take-home test—analysis of a case study and responses to two or three questions.

All assignments are graded by a minimum of two faculty members, at least one from the university and one from the public school. When the two do not agree, a third faculty member evaluates.

RESULTS

A number of outcomes point to the success of the model clinical teaching program. Evaluation also shows some areas in which improvement is indicated.

Director's Conclusions

In *The Case Study: An Alternative Approach to Clinical Teaching*, the program director draws these conclusions:

> University professors have learned from the public school faculty members. . . . Public school teachers have gained personal confidence and self-esteem as they teach university students. . . . They report that they feel their knowledge and opinions are worthwhile and helpful to student teachers. For both groups, respect for the other's professional role has been evident.

State Approval and NCATE Reaccreditation

In 1991 the teacher education programs at WSSU came up for review by the North Carolina Department of Public Instruction and the National Council for Accreditation of Teacher Education (NCATE). Both the state and the NCATE reports cited the collaborative aspect of the model clinical teaching program as a strength. The NCATE report also identified as a strength the fact that the thinking skills focus of the department pervaded the institution.

Feedback from Cooperating Teachers

Early on, cooperating teachers were asked to participate in a seminar at the university. Its purpose was to discuss the objectives of the model clinical teaching program and to elicit feedback on the program's effects. The cooperating teachers were also invited to attend at least one of the methods classes.

The feedback from cooperating teachers included suggestions to continue their involvement as consultants or teachers in methods classes, to conduct methods classes before student teaching so that critical thinking skills would be in place when student teachers entered the classroom, and to include more cases on school law and behavior management.

Research

Longer range outcomes of the program, such as whether first-year teachers who have completed it are more successful or

whether they stay in teaching, have not yet been examined. However, two research studies have been completed on aspects of the program, one comparing student and faculty evaluations of the methods course, the other comparing model clinical students and traditional students.

In the first study, conducted by program director May, 15 students and 4 faculty representing elementary school, middle school, and special education programs rated 11 course components on a 5-point scale (a score of 5 indicating that a component was extremely valuable, important, or desirable). The components included time, setting, heterogeneous grouping, analysis and writing of case studies, daily entry in a journal, reading and summarizing professional articles, writing a research paper, knowledge of the TPAI, knowledge of CoRT, videotape of a lesson, and meeting with specialty groups. In addition, students were asked to comment on faculty performance, methods used to teach the course, course content, and support received from faculty or students.

Across all components and on all but one individual component, the students' average rating was lower than the faculty's. However, the differences were statistically significant on only four components, as follows:

Component	Students' Rating	Faculty's Rating
Heterogeneous grouping	4.130	4.889
Reading and summarizing articles	2.530	4.000
Analysis and writing of case studies	3.333	4.889
Daily entry in journal	3.333	4.333

In response to the open-ended questions, students indicated that the faculty were concerned, friendly, informed, excited, caring, well qualified, supportive, and helpful. Four of 15 students thought that the combination of university and classroom teachers was an outstanding part of the course. On the negative side they reported that some staff were not present enough and some were not supportive when they needed encouragement.

Students found the collaborative method to be excellent and the class atmosphere to be relaxed and comfortable. They reported that the open classroom helped them learn from others. However, they felt that more time was needed on specialty areas, and they objected to all assignments being due at midterm. They also reported overkill on case studies.

On the subject of content, students said that the course was packed with information that made student teaching easier and more effective. However, they wanted more information

on school law, referral of exceptional children, behavior management, assertive discipline, and child abuse. They suggested eliminating the research paper (which was done) and reducing the time spent on case studies.

Students indicated that support from faculty was good, that faculty were sincere and helpful, and that faculty gave relevant input and immediate feedback. The students felt that they could talk to all faculty members. However, they expressed a need for more time to talk about student teaching fears. Students found peer support readily available and recognized the presence of a network among their counterparts.

In the second study, conducted by university professor Dan Wishnietsky and director May, 14 students from the model clinical teaching program and 10 from the traditional methods class were compared in terms of their performance on the TPAI and the WSSU Exit Criteria for Education Graduates. Before the performance evaluation, scores on the National Teacher Examination (NTE) were recorded.

On the performance evaluation the means for the variables on the TPAI and the WSSU criteria were higher in every case for the students in the model clinical teaching group. On the NTE, by contrast, the means of the model clinical teaching students were the same as or lower than those of the traditional group.

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